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# An Address
ON
# ACIDITY.

*Delivered before the Reading Pathological Society*

BY JAMES F. GOODHART, M.D. ABERD., LL.D.,
CONSULTING PHYSICIAN TO GUY'S HOSPITAL.

GENTLEMEN,—After thinking over many subjects upon which I might address you I at last decided to take up the—shall I say hackneyed?—subject of acidity. I have chosen it with some reluctance because I have on other occasions and in other places introduced it into addresses although not in the dominant way which I propose to myself on the present occasion. But I do not find that the opinions which I shall advance (they are not mine only or originally) are as yet, at any rate, generally accepted, and yet I believe them to be true. Everyone who holds a pronounced opinion of any kind is always sure that he is right and that everyone else is wrong, and I should not be surprised if a majority of my hearers this evening stood in this relation to me of "everyone else." This, at any rate, may serve to rouse your interest.

Now there are several kinds of acidity. I may say that I am going to treat my subject from an entirely clinical standpoint. The complaint, for example, is often made that this or that individual has such an acid taste in the mouth; another lot of complainants will tell you that they cannot take anything acid; another group will assert that such-and-such articles of food, maybe even common articles of diet, will turn *acid*. As to these perverted tastes or sensations I am really not able to give you any information as to their cause, nor can you, I expect, do any better for me, for although both patient and practitioner are too often satisfied with ascribing such a state of things to the *liver* I am not clear that such an ascription helps one much, and still less so that it is correct. But if you suffer from *acidity*, it practically means for all of us that it is uric acidity, and it is of uric acidity alone that I intend to speak to-day. I will begin by giving you the notes of a case that I was able to observe under unusually favourable circumstances, for the patient was much interested in his multitudinous symptoms and active-minded enough to record them intelligently.

A man between 50 and 60 years of age, apparently in excellent health, a hard worker, and a most abstemious liver—for he drank nothing alcoholic and lived largely on milk foods, of which he had always been fond and digested excellently—was taken suddenly, perhaps after exposure to the poison of influenza, with a general tenderness of some bad teeth, which chopped about in a most erratic way, being now in this tooth and now in that, the affection leaving one point completely when another was attacked. Within a day or two he was awakened suddenly in the night with a feeling of extreme distension under the diaphragm; there was no pain, but the distension was so great that he felt as if he must burst and his breathing was hampered. The attack passed off within a few minutes and he went to sleep, not, however, before he had noticed that his toothache had suddenly and completely gone. Two days later a similar seizure occurred of a more severe character, leaving behind it a soreness in the epigastrium, but with this exception—it, like the previous attack, vanished never to return. He now began to have profuse night-sweats, chiefly associated with sudden uncontrollable panics, which would wake him up suddenly between 2 A.M. and 3 A.M. and render him absolutely sleepless for the rest of the night. He then noticed for the first time that he was passing a quantity of uric acid in his urine, entirely confined to the urine first passed on rising in the morning. As there was still a considerable amount of soreness in the epigastrium resulting from the nocturnal attack he dieted himself for many days, exclusively on toast-and-butter, milk, junket, bread-and-milk, custard and rice puddings, but the uric acid in his urine (expressed as obvious sand) became more and more abundant, and seemed to coincide in this respect with increasing nervous depression. He now had another freak, and for a few days had a "paroxysmal toothache," as he described it, in his *chest*. Every few minutes throughout the day and night, when awake to notice it, he had a momentary twinge of pain behind the sternum, associated with a sudden glow or flush over the head. This was apparently angina-like in its character, but there was not the least disturbance of the heart's action, and walking and even climbing hills made not the least difference in its coming or going. This condition would last perhaps 24 hours or so and then cease, leaving him particularly well, and after two or three recurrences it ceased altogether, to be replaced by a similar sort of pain in the abdomen, which for many weeks kept him in a state of great discomfort and distress, being associated, as it was, with a horrible feeling of "gone-ness" in the epigastrium and so much hyperæsthesia of the intestine that the slightest peristalsis seemed to become obvious and discomforting. Added to this he had obstinate constipation, quite foreign to his habit, and any attempt to counteract this instead of bettering matters added greatly to his discomfort.

Weir Mitchell, in his latest book "Characteristics," makes one of his puppets express the opinion that no man dies triumphant with disease below the diaphragm, and I am sure that my patient would endorse this statement; for although he is not dead, the misery and dejection that accompanied the exaggerated consciousness of the workings inside his abdominal casket were often extreme. Several interesting observations, as it seems to me, were made by my friend. He did not consider that there is any *continuous* peristalsis in the intestine. It appeared to him that the propulsion onwards of the food is accomplished in shifts. For from two to three hours after food there was rest in the abdomen; then on came the pain and discomfort. Thus if there were three meals there were three shifts and the absence of any one meal was likely to delay the arrival of the coal at the mouth of the pit.

The intestine would appear to be an organism of the most methodical habits, whether these be unduly active or unduly sluggish. We all know that this is so from clinical experience. A lady came to me the other day with that early morning looseness which so often exists in the nervous from say 5 or 6 A.M. to 11 A.M., and then ceases for the remainder of the day. It had existed for a year or more. I have seen several cases, male and female, where this had gone on for years and had become a distinct handicap to the pleasure of living, and yet it is well nigh impossible to cure it, for it is clearly a faulty habit of the sensori-motor centres.

The patient also noticed that, for him at any rate, there was no average as regards the quantity of the alvine output. On some days there was much but on others little. So, also, on some days there were pellets, sometimes bullets or larger, sometimes tape strings, and so on. He was always, in fact, receiving unpleasant suggestions as to the condition and amplitude of his vitals until he accepted the axiom that I gave him to do as the dog does—he never looks behind him. By this he established the fact that the import of these diurnal variations is very much what the mind makes them and that they are no absolute guide to the state of the viscera which puts them forth.

But these are digressions. During all this time the patient was keeping to a milk diet and the uric acid output, although varying and most energetically so, was nevertheless not obviously influenced by the diet, and inasmuch as he did not improve a *volte face* was ordered and a meat diet was substituted for much of the farinaceous food hitherto taken. He now had meat twice and even three times a day. All green vegetables were excluded from the diet because for the time being they seemed to cause flatulence and more discomfort, and he was allowed only a small quantity of fluid at his meals for a similar reason. From this time he gradually increased the quantity of food taken, until he ate much more largely than he had ever before done, and he also took on and off for two or three days at a time, a glass of port wine at 11 A.M. and beer or cider for dinner. Under this *régime* all the uric acid sand disappeared from the urine and he recovered his health. Since then he has continued to live much more freely than he had ever before done in the matter of meat, he eats less starchy food, takes an occasional glass of beer or cider—a thing he had not done for years—and he keeps well. One other point may be mentioned, although it is too large to be dealt with here—it is that he was distinctly not so well if he indulged in any brisk exercise.

Now, I have given this case in detail because it seems to me, first, of interest in itself, and, next and more

particularly for my present purpose, because of the conditions under which gravel appeared in the urine. In itself it is worthy of note because here was a man of by no means what would have been called a nervous temperament, who suddenly passed into a condition, possibly from overwork, possibly from influenza, in which he became the sport of neuralgias, now in the teeth, now in the head, now in the thorax, or in the stomach, the intestine or the diaphragm. And I suppose that insomnia may be considered a similar condition, for it is an unnatural alertness of brain cells which ought to be paroxysmally sluggish. I do not doubt that the case is what most men would unhesitatingly call a case of uric acidity or irregular gout. It has all the characteristics of that affection—the neuralgic type of the disease, the rapid substitution of one neuralgia for another, of one nerve-storm for another, and the rapid change from a feeling of perfect health to that of positive gloom. And I would have you particularly to note that it occurred in a man who could hardly be living on a diet less calculated to produce uric acid according to usually accepted doctrines. He was a small eater and his diet was mostly milk, milk puddings, bread-and-butter, vegetables, and fruit. Meat would hardly on an average have supplied two ounces to his daily diet, yet uric acid appeared in quantity. He dieted himself still more rigorously, to the practical exclusion of meat and for a time even of fish, and he got worse instead of better, and so he remained for several weeks, rest notwithstanding, until, indeed, he commenced to live more generously and particularly so in the matter of meat and stimulants. It therefore opens up the questions which I want to discuss of uric acid and acidity and the treatment, if any, that best befits it.

Now, of course the strictly chemical theory of acidity is this—that it is a mere question of chemical equations and combination. So much C and H and N and O are put in and so much C and H and N and O are given out in some or other form, and therefore excess of nitrogenous products taken in will lead to excess of nitrogenous products being given out; and therefore those articles of diet which give an excess of nitrogen will above all offend in this way. Thus it is said that meat is the chief offender in the production of uric acid, and that uric acid or one of its congeners getting into the blood poisons the tissues and so produces all the multiform symptoms—nervous, hepatic, renal, cardiac, and so on—which are ascribed to it in such truly liberal fashion.

Now, I am not here to-night to say that this is not true. I am here to contend that it is only very roughly true. True, perhaps, in the same sense that the artist's preliminary sketch in charcoal is to the finished picture as it hangs upon the walls of the Academy. I should call this the view of pure chemistry; but then our problem lies not merely in chemistry, but in *animal chemistry*, and that is a very different, or at any rate less demonstrable and certain, matter. And thus it is that clinical experience has to be taken into account; and in giving, as it does, a more comprehensive view, adds, unfortunately, much to our difficulty of forming positive opinions. And in this regard I want you to think for a minute of how living a thing is uric acid. I should call it one of the most fickle of animal products. Remember how paroxysmal it is; that it will alternate in some so that at one time there shall be a highly acid and uric acid urine and at another a *feebly* acid, or neutral, or even alkaline, liquid containing phosphates. And, curiously enough, just as I have written this there comes into my room an old friend who has been long troubled with acidity and who has to my knowledge often passed uric acid, but who after a course of waters has lately been passing a neutral urine and on one occasion has passed an appreciable quantity of sugar—that is, 20 grains to the pint. So that he fitly comes in to link on my previous statement with the remark which I have next to make—that the passage of sand will often alternate with the passage of sugar, and particularly so with the glycosuria of the declining decades of life.

Then, again, uric acid will appear in the urine in quite remarkable fluxes in the course of chronic renal disease. I have several times, too, seen a fatal attack of renal disease *begin*, as one is obliged to say—although possibly not accurately so, for acute disease too often begins in pre-existing chronic change—by the appearance of a quantity of uric acid in the urine, and this has subsided to give place to a load of albumin. The occurrence of uric acid in the urine is well known in the early stages of chronic renal disease; and this may well be taken to suggest, as some have suggested, that the appearance of uric acid in the urine at *any* time is an indication of defective action on the part of the kidney. And, indeed, I see little reason to take exception to that view, but even if it be so we yet need to know what it is that *makes* the kidney defective, not only in those in whom by reason of age and other causes defect might naturally be expected, but even at all periods of life, from early infancy to old age—what it is that regulates function in this way so that at one hour one may say uric acid is *poured* out and at another has vanished like a dream. And does not this so frequent occurrence of uric acid in the urine, surely almost as common in young children—not uncommon even in babies—as in adults of all ages, suggest the consideration of the question, can an occurrence of such frequency be such a harmful thing after all? May we not rather be inclined to feel that it is no more at any rate than a fit of bad temper that needs no treatment by heroic measures unless the circumstances are exceptional? And, indeed, this interpolation to some extent suggests the answer that I should give to the reason of the appearance of this stormy petrel of pathology.

I am sometimes asked the reason of the fact that pain is often so much worse at night than in the daytime and that without the cause ceasing the pain will yet vary from time to time, and the reasonable answer seems to be because all function, even life itself, is but an interrupted current. We look, we hope, we pray for the future to disclose that *continuous* existence in which the hour of depression, of pain, of loneliness, of void shall no longer be the necessary complement of energy, of *bien être*, of oneness and fulfilment. And so I think about uric acid; its vagaries of appearance seem to me to be much better explained by some perverted or ill-regulated physiological processes behind it, than by that of untimely or ill-judged stoking. I must add, too, that we know that the properties of uric acid are not poisonous, for it exists in excess or is produced in several diseases without any symptoms of "acidity." And the clinical picture of cases tells the same tale, for with what body do they come? One has been already narrated.

Take now the last case that has come before me—the case of a man who has lived a hard and anxious life and who has seen many physicians. He tells me that he has always been highly strung—a beautiful picture, or poem, or music, would always move him to tears. He is restless and fidgety beyond control; sometimes he is quite beside himself. His urine from time to time contains a quantity of uric acid; at others, and particularly after what he calls his storms, he passes the low specific gravity water so well known and which Dr. Haig has shown is so often associated with the formation of uric acid. Bodily this man is in a very fair state of nutrition, but he is wearing out unquestionably in his nervous textures, and one may suspect also in others, for he has one of the most marked conditions of arcus senilis that I have ever seen. Still, so far as the working of his individual organs go there is no evidence in any of his other functions that they are at present really defective.

Take yet another case, within the last few pages of my note-book—that of a little girl, aged eight and a half years. She has grown enormously and far beyond the size for her age. She is morbidly excitable and is subject to uncontrollable fits of screaming. Anything exciting will send her off, both things she takes pleasure in and wants to do as well as those that are distasteful. She is always "so tired." She is constipated and her urine often contains a copious deposit of red sand. The case seemed to me purely one of an excitable nervous system made worse by the exhaustion engendered by a period of inordinate growth.

Here is another case of a woman, aged 52 years. All her people are gouty and one sister died from gout. The patient has been subject at times to attacks of insomnia for several years and for one of them she came to me. She has a heavy giddy feeling in the back of the head and spine; her head feels alive; she has fits of melancholy at one time and of excitement at another. She has had a lot of domestic worry lately, and she attributes all her trouble now existing to that. She is a woman of fullish habit and is said by her medical attendant to be fond of the good things of this life, but on careful inquiry I cannot ascertain that she is at all a heavy or gross feeder and she takes only a tablespoonful of whisky twice a day at her meals. To eliminate all doubt as to the matter of food and drinks I cut off all whisky, and ordered light foods only, but although she was a little better she did not permanently improve and uric

acid was still as abundant on occasions in her urine as ever. Then a little fresh worry occurred and she was as bad as ever, her head going wild, and when it did so her stomach would go wild also, and she would have attacks of what she called "epigastric bouleversement." After a little while she got a definite attack of gout, whereupon she had a spell of slight betterment and then she relapsed into her old state again. She has been dieted carefully and has, I believe, paid strict attention to orders, for she is terrified at her attacks and would go through any misery to get rid of them. She has also had many remedies, including waters, but without much obvious effect upon the course of her disease. She now wants to undergo a thorough course for the gout, although there can be no doubt that she has already tried more than once that favourite prescription, but she is still a convinced believer in her acidity, and wants to carry out again that plan which promises so much and achieves so little.

One more case I must give. It is that of a man, 47 years of age, at the top of the tree in his profession—a position which has been achieved by continuous hard mental work and in spite of the fact that there has not been a day in all the 20 years that he has not loathed his "trade," as he calls it. He came to me because of a bitter taste in his mouth which he put down to "acidity," created, as he supposed, by a pint of claret taken daily at dinner. He has lately lost weight because he has had an unusual degree of strain and stress of work. He is spare and dark. His stomach is easily upset, he is sick easily, and he has to get up at night to pass his urine. I had a long talk with him, for he was a most interesting man, and I am sure that he is a most careful liver, his diet being chiefly milk and milk food. He thinks that he has created his "acidity." He is rather great on acidity, but he takes most sensible views of it and is fully confident that the bed-rock of his ailment, as the Americans say, is his overwork. Still he wants to "get this acid out of him," and asks about piperazine and all the latest drugs which are supposed to perform this service for cracked, crabbed and suffering humanity. He has a chronic lumbago, about which I am not altogether happy, particularly as his radial arteries are rather thick, and when lying down flat his impulse is in the sixth space outside the nipple. But the sounds are natural and his urine, although 1024 and containing uric acid, is free from either albumin or sugar. This is a case where the urine sometimes contains phosphates and sometimes uric acid in excess. I gave him no medicine as all physic upsets him, but advised more meat and Contrexéville water in the place of so much milk stuff, and, best of all, a long and absolute holiday. He said on leaving me, "By the bye, I *must* have a little sweet," and I said, "*By all means;* a little won't hurt you."

And talking of this case reminds me that only the other day there came to me a young man who also was an adept at acidity. He was, of course, a highly nervous fellow, full of all sorts of fads and fancies, but what particularly amused me was that he complained of a pain in his side which was *not* acidity "it was something quite different from that." This was so precise a statement, on what is usually most indefinite, that I at once dropped upon it hoping thereby to obtain information on the position of the manufactory of acidity. But, alas! no, the comparison of the two pains had exhausted the descriptive power of my friend, and as all he could tell me about the pain with which he compared it was that he feared it was due to some carbon that had got down into his lungs, from his habit of inhaling tobacco smoke, which he has given up for many months, the pursuit of the subject did not promise any adequate return for more expenditure of time.

I will not weary you with any more cases. You all know them as well as I do, for these patients come into your rooms one after the other and surely the day of a busy medical man seldom passes without one or more coming within his ken.

How do we treat these cases? Now, I have been interested in this question many years, so I am not speaking hurriedly, and I have come to be certain that in the majority of cases of uric acidity it is scarcely a matter of diet at all. But this is not the common opinion. I shall probably do this meeting no injustice when I estimate that the majority, probably the large majority, when a man is found to be passing uric acid, look upon it as a matter of diet *exclusively*. I want you all to go back upon your experience, to put away all that you have read and seen through other people's spectacles, and to observe again afresh and then to answer the question, Is it so?

While I was thinking over this address a medical man came to me about a relative and while we were waiting or talking this gentleman introduced the subject of his own health—I think it came out in relation to the matter of the family tendencies of his relative. He told me that he was nervous, but what concerned him most was that he had "a lot of uric acid floating about in the system," as he expressed it. He had gone into the matter very thoroughly; he had read everything, had tried every remedy that had ever been suggested, and had tried all sorts of systems of treatment, and he had come to just the same conclusion as I have done—that he could not tell what determined the production or appearance of uric acid, but he did not think that he had got much help from diet.

I have notes of another patient, a most intelligent woman, who had seen many people for uric acid, and she asked me, bluntly, if I knew what led to the formation of this product, and when I said I did not know she said that she had made careful observations on herself for some long time, and that she had come to the conclusion that it was impossible to say why the product appeared. She was certain that it had nothing to do with diet, and she was sure that in her case the catamenial period had something to do with it.

The very vagaries of its appearance are enough to make us pause and inquire into the reality of this dietetic theory. In one group it is this or that form of liquor. One man will tell you that he never can touch champagne lest he have gout, which for the most part means what we call irregular gout—that is, uric acid gravel in the urine—and various aches and pains in his fingers and toes or in his neck or his back. In another case it is a glass of hock that is the poison (it is always a single glass, mind you), or of sherry, or of beer. With another long list of sufferers sugar is the fatal thing, or potato (I suppose because it is a typical starch). I think it can be only a small part of civilised society that ever touches a potato. It, indeed, must be a very inferior class of article to judge by the scorn which so frequently accompanies the statement, "Of course, I never touch potatoes." With others, in similar fashion, it is meats that are tabooed. "I never touch butchers' meat," is equally commonly heard; and I have sometimes wondered why the poor butcher should be so commonly conjugated with his meats in this chorus of universal disapprobation. I might, of course, go on all day, for the full enumeration of the various articles of diet that now and again have been associated in the minds of patients with uric acid; indeed, so many are they, that I often say that I have only met with two articles of diet which I have never known to be complained of, and these are toast—no! I beg its pardon, I should have said "well-torrified bread" (which is, I suppose, not toast but cinders)—and the other article is whisky.

We cut out of the diet sheet all red meat. But why only red meat? Surely, it is very inconsistent to reject this alone of all the nitrogenous products which are supplied to us. Why not exclude fish and fowl and eggs and all the vegetable albumins? These things are allowed because they contain less extractives. But is this rule so universal as we make it? Emphatically no. Stomachs are very individual organs—some oh! so touchy; others wonderfully obliging. I have several times been surprised to find an individual stomach when desperately ill craving for a slice of bacon, and what is more to have received its master's commands, obeyed them, and to have derived no hurt from its indulgence. Now, *a priori* one would certainly think that few things could be more indigestible than the meat of bacon, because it has not by any means always been *fat* bacon, it has been *fried* bacon. And I have always supposed that the reason why so much of civilised humanity indulges in it, especially at breakfast, is because a sort of intuitive consciousness has come upon it that the stomach is more ready to cope with the indigestible at a time when it is fresh from its nocturnal rest. But if sick stomachs find themselves equal to bacon, surely it behoves us to think twice before we deprive so capable a servant of the delights of a nice piece of juicy red meat. My own opinion is that there is nothing more digestible or void of offence in any way, and, as I have said before and got hauled over the coals for it, I care not whether it be beef or mutton or pork, only in the latter case I should bar the attribute of redness, for reasons, however, other than digestibility. Personally I have great doubts whether the chicken that we are all so fond of ordering to an invalid is any more digestible than mutton or beef, though as regards our present subject I

suppose it may be taken as proved that it ranks lower in the scale of urea-forming products than do beef and mutton.

And then as regards vegetable albumins, what I have just said accords with my own experience, as I do not doubt that it accords with yours, for it is impossible to be otherwise than sure that in children (who are, of course, seldom large meat eaters) it is not those who are fed fully on meat who especially pass uric acid crystals; and you do no good by cutting them off all meat, as is very commonly done. Over and over again I have seen children deprived of all meat because of the passing of uric acid, and parents in a state of great anxiety, as if some dreadful disease were sapping the vitals of their offspring, but there is seldom anything to be alarmed at or that calls for any serious change in their habits of life. Such children are, I think, often pallid, pasty-looking, and usually want some little attention to their diet, in the manner in which it is eaten, and in their general hygiene, but that is all, and it is generally the better plan to increase their meat (plain cooked, roast or boiled; not beef-tea or beef extracts or jellies, to which parents often fly between meals in poor-looking children), make them drink more water, and diminish correspondingly the quantity of starch food taken. That is the practice which I have carried out for a long time and I have never seen reason to regret it. Regulate the diet all round, as the late Sir William Roberts wisely said; it is not the fault so much of any special food. Children will pass uric acid even upon an excess of milk.

And I think that perhaps we can see that all this is reasonable enough if we remember what is the state of the case as regards glycosuria, for the formation of uric acid and the formation of sugar seem to me to run on somewhat parallel lines. Nothing seems more sure in medicine or physiology than this—that you may remove *all* the sugar from the *intake* and that you will still get sugar in the *output*. Or, to take the less precise field of clinical experience, in the glycosuria of old people you will get many a case where the exclusion of sugar from the diet seems to make very little difference as to whether sugar appears in the urine or not. I have a case of this sort vividly before my mind now. This old lady is inordinately fond of sugar and it is impossible to keep her away from things that contain it, but it makes very little difference. Sugar is absent for long times together and then, without evident reason, it re-appears. The same thing holds with the diabetes of younger folk, for although you can diminish the output very largely, the disease is yet paroxysmal or fitful and the quantity of the output will not very accurately accord with the intake. I assert that it is exactly the same for uric acid. Over and over again have I seen people dieted up to the extreme point of misery—and if you have as yet no idea how miserable a rigid diet makes you, try it at once for a month and see; you will be a much better practitioner at the end of the month than you were at the beginning—and they were yet passing uric acid crystals almost by the spoonful.

It seems to me, therefore, clear that if you could absolutely exclude urea-forming products from the diet sheet you would yet find the human economy turning out uric acid, and although you might reduce the capital quantity in some cases, you could not do even that in everybody. In other words, uric acid is an *ash*, common to the many metabolic processes going on in the body. In this process and in that of the many taking place, re-arrangements of the elementary or primary combinations are constantly going on, new conjugations are formed, and the required elements are also stolen from the stockpot if they cannot be obtained from, so to speak, a legitimate current supply, by such other elements as are in a state of hunger and yearning. It is important to bear in mind, too, that there may be two opposite metabolic defects, but there is the defective metabolism of want of supply as well as the defective metabolism of excess and you may induce a uric acid excess as well by the one as by the other.

Who is there who cannot remember, when he thinks back on what he has seen, of the many times there has come before him a spare, wan, anxious man or woman, a martyr to headache, to indigestion, to constipation, to gravel, to melancholy, whose every organ seemed to have been created for the sole purpose of exasperating its master, so full was he or she of the misdeeds of the one and the other. And who can doubt that in these the pathology is not one of excess?—the whole bearing of the patient forbids such a possibility. These people have almost invariably dropped out of the dietary one food after another because it was indigestible or because it produced gravel, yet, starved as they are, the uric acid still appears in the urine. The whole head is sick and the heart faint, and this is what is the matter with these people, whether you call it gout or acidity or any other name, and what most of these people want is a good fat chop and a glass of stout. "Oh, but that would never do; it would give me a bilious attack," as if, granting that their forecast is correct, a bilious attack occasionally would represent a tithe of their present misery.

It always seems to me that we see things in medicine far too much with the eyes of other people than with our own, and thus all treatment coming from authority tends to become stereotyped. There is surely a good illustration of this in diet sheets; you can hear it from patient after patient as they come before you. I have a diet sheet now before me for persons suffering from gravel which has received the imprimatur of one of our most able physicians. I am willing to admit that it is not a bad one as diet sheets run, but let us look into it for a minute. And first of all it is a printed one. That, of course, means that Dick, Tom, and Harry all get the same if suffering from gravel. Can I have any stronger corroboration of my contention that gravel is made a sort of, shall I say, demoniacal possession and that it cometh not out of us but by prayer and fasting? But I want to drive home to-night that Dick's gravel and Tom's gravel and Harry's gravel are three separate devils most probably, and that while prayer, which would, I should hope, include repentance, might be good for one and fasting for another, by the time you had arrived at your third case you certainly ought to be ordering stout and oysters or any other renovating dish that you might personally believe in. I protest with all my might against the absurdity of humanity being made to run in common grooves like this, and on such a very personal matter, as the food we eat. Well, then, of course, from what I have already said, my three poor friends being afflicted with that terrible disease "the gravel" must avoid eating sugar in every shape or form. And for what reason? I suppose the compiler had in his mind that sugar goes to form glycocine, and glycccine is the material out of which uric acid is formed. Whether this be the case, whether this be even a fair statement of the case, I will not be sure, for I am professedly treating the question from the standpoint of every-day practice only; but if it be so I should still hold that, after all, sugar is not a poison, and this wholesale condemnation of a wholesome article of food can hardly be other than a fad. By all means cut off sugar on good reason shown for this or that individual; but I know this, that there is many a gravelly one who can take sugar in moderation as an article of food and not be a bit the worse for it. Nay, more, there are some of the "gravelly" who cannot do without sugar. "Oh, let me have a little sweet," as my patient said. I see it stated in the Life of Sir John E. Millais that Rogers the poet took a parental interest in him and that he used to say to his footman, "Put three lumps of sugar into Mr. Millais's tea," when poor Mr. Millais visited him; "he ought to like sugar, he is too thin." Rogers, although eccentric, was a wise man; and oh! my hearers, those of you to whom this appeal comes home do reflect that there are some of us who triumph over old age in our liking for sugar, and why have you got your knife into it so? Let me tell you in your own interest that if ever you are called in to attend me, and you cut me off my sugar I will promptly go and see a consulting physician without telling you, and come back and call in your most bitter rival. What more can I say to show how strongly I feel on this excellent food-stuff?

I see that fat stands next on this list of "dreadfuls," and for the same reason, I suppose, its glycocinic leanings, but the wisdom of this exclusion seems to me to be cancelled by the allowance of butter in the "may eat," and the exclusion of cream amongst the drinks. And here I am in for another crusade. I am not exaggerating in the least when I say that people come into my room one after the other to tell me that their medical attendant has told them never to touch fat. There can be no doubt about it that there is a routine order abroad never to touch this material. I will not say that it is specially to persons who pass uric acid that it is given—it is mostly to those who are said to suffer from their liver. Well, we are each of us entitled to our own opinion, and I do not want to tread roughly upon the cherished opinions of anyone; all I want to be sure of is, that they are your own opinions and not those of some, perhaps brilliant, teacher passed on and assimilated without correction by

your own thought and experience. But even then I want you to think the matter over once more and to give it another trial. And when the next poor sufferer, with, perhaps, a liver, or what not, tells you that he never takes fat and that cream would make him bilious, just gently murmur that even infants can digest cream easily and that it is really a most excellent food for the liver. And so it is, and so is good olive oil, but it generally happens that when I order it, as I often do—for it is much more palatable than cod-liver oil—and by the bye it is a funny thing that when the liver depends so much for its substance on fat that all fat should be taken from the food in case the liver should be upset,—whenever I order it, I say, the patient holds up his hands in horror at the suggestion because his medical attendant has forbidden it. There are several other articles excluded that cause me much wonder; such are herrings and eels (the latter being one of the most tender and delicate of foods if properly cooked), but I must pass on to my third crusade, and this has to do with the "may drink."

Now in this list there is nothing to take exception to, except that it is not hinted that it is at least *possible* that the person who passes gravel may be the better without any alcoholic beverage. He is told that he may have a little light wine—Moselle, Hock, Chablis, Sauterne, or cider in small quantities. But in ordering, or rather permitting, light wines and nothing else this diet sheet surely does not follow the usual routine of the profession. As a rule, the profession forbids all wines of every sort and tells the patient to drink whisky. And as I have said before, although often professing the greatest possible dislike to it, he yet drinks it with astonishing facility. There can be no possible mistake about this. I have had ample opportunities of forming an opinion and I say that people hardly ever drink beer now; they are frightened at nearly all wines; so that they run like sheep after the last new white wine that the fashionable medical man of the time orders them, and most of them eventually discard all wines and take—on the whole and with few exceptions—very complacently to whisky. Again I ask, Can a routine treatment of this kind, a routine prescription which I am persuaded must often come tumbling out of the mouth of the prescriber without any thought, be fitted to Dick and Tom and Harry indiscriminately? What can there be of harm in a glass of good light wine or in a glass of light beer that is not present, only more so, in spirits? Mind, I am not holding a brief for either the one or the other, but I am quite sure that if a man requires any stimulant at all—a matter he must decide by experiment for himself, for I maintain that no medical man can tell him—he will often be the better for a glass of wine, than he will be for the now commonly substituted whisky. And in nothing more than this, does the question of the individuality of disease come in. What a man drinks, if he passes uric acid, is, in my opinion, a much more important matter than what he eats. A large number of those suffering from acidity had better take no alcoholic liquor of any kind; others are better for some. It should always be a most moderate quantity. To many champagne seems to be a poison, to others it is the most wholesome wine, and they drink it year after year and do well upon it. Some, again, do well upon port, although this is an exceptional thing, but claret and the lighter wines are the more generally useful. I do not think there can be any doubt that there are some who cannot digest wine and yet who do require some little stimulant to get through their work, and for these whisky or brandy well diluted comes in as a valuable help. I am not objecting at all to its well-considered use in such cases as these; what I am objecting to is that a glass of good wine should be so universally discarded and ever so much more alcohol taken in the shape of whisky. And, moreover, this prescription of the medical man is changing the habits of the people. We used to drink beer, we now drink whisky; and I am sorry to say that this is the case for the young men as well as the old. The young men in our large towns will often confess to three or four glasses of this strong acid, to them, poisonous drink in the course of the day without having the least idea of the harm that is accruing to them. And I think we medical men are largely responsible for this state of things. We tell everybody to drink whisky. A well-known medical man in Brussels came to see me the other day and he was asking about his drinks. He told me that he had got some very good wine, but that he found over here that we all ordered whisky and that it was whisky everywhere. Even the waiters at hotels and dinner-parties brought you a whisky-and-soda almost before you had asked for it. And he was not far from the truth. People are told to drink whisky because, forsooth, it is the purest spirit, and young and old are drinking it. My idea about drinks is, first consider whether you would not be better without anything and, that decided in the negative, then let the young man drink his beer, the middle-aged his wine, and the old man his toddy. I am, of course, talking of the daily habit. An occasional glass of anything hurts nobody, even if it should make one think he has a pain in his great toe on the next morning.

Thus far it will have been gathered from what I have said that uric acid is not a product to be eliminated so much as to be prevented, but the results of sending patients to foreign spas are often striking and would seem to traverse my contention. You send a man to Contrexéville, for instance, and he passes large quantities of uric acid while there, and he comes back feeling light as air. Far be it from me to deny the benefit that is often obtained at such places, I send too many away on errands of this kind to so belittle mine own honesty. But before accepting straight off the explanation that the uric acid is *extracted* as a matter of depuration from the blood or tissues, a philosophical inquiry must at least consider the possibility of other causes. Years ago I remember paying a visit with a friend to some aniline dye works, and there I saw that, amid abounding commercial prosperity, the manufacturer was overwhelmed with pitch. And here also it is possible—I pray that the magicians of hydrotherapy may forgive me for such a heresy,—it is possible that, like other by-products of commercial success, uric acid may be manufactured on the premises, so to speak, and that there are specimens of it that ought to be labeled "Made in France" or "Made in Germany." In the daily manipulation of many urines, year after year, I have often been struck by the sensitiveness that this fluid displays to the addition of foreign constituents. There is many a man, for instance, who notices that he is passing uric acid because he happens to micturate into some cold urine or perhaps passes urine of one specific gravity into urine of another specific gravity; a specimen of this kind in a nervous observant man might easily lead him to suppose that he was risking the formation of stone in the kidney or bladder and that it was necessary to undergo a course of treatment for it, but I am sure that it is passed in solution, and I am indebted to Dr. Luff's most interesting and instructive Goulstonian Lectures on the Chemistry and Pathology of Gout for what seems to me the probable explanation of the phenomenon. Dr. Bence Jones, he writes, was the first to show that the amorphous urate deposit yielded to water a soluble moiety consisting of true biurate and left a sediment consisting of pure uric acid.[1] Winter work gives one quite a different view of urines from that given by summer work. It is one of the small bothers of work in cold weather that materials crystallise out so much more readily and thus convey false impressions, and this both with and without reagents. It is one of the drawbacks of the ferro-cyanide test for albumin that the preliminary acidification with citric acid so often clouds the fluid with an amorphous deposit and which does not always readily clear with heat, as it is said it always does. I think that it is possible, too, that mucus in the urine has something to do with this sensitiveness or otherwise to reagents and I have always thought that Dr. W. M. Ord's observations upon the rôle of mucus in the formation of urinary calculi are of great clinical interest.

But to return to waters and their effect upon uric acid. I have often been struck, as many of you must have been, and amused besides, with the fact that the medical men at spas almost invariably say to their patients, "The good does not come at once; you may even be worse before you are better; you must await the 'bye-and-bye,' and you will require to come again for two or three years to get the full benefit of our waters." Yes, these gentlemen have the most canny way of eating their cake and having it. Nevertheless, what they say is true. We all know that it frequently happens that a man goes to waters to get rid of his uric acid and he has a bad attack of gout directly his course is over, or mayhap when it is half through. I have been told by those who have been at Contrexéville that they have passed, not uric acid but oxalates; some, as I have already noted, have passed phosphates, and it is also the fact that the first effect of the waters is to reduce one to a state of absolute limpness and enervation. It is most difficult to understand this if there

[1] The Pathology of Gout, p. 85.

be any real depuration. This one would suppose should start and go on progressively. But it is not so, many patients are at first much deranged in their digestion by the treatment, and are, I should say, in the very ideal condition for making and passing a good output of uric acid.

Then, too, some of the uric acid that is passed is probably washed or dissolved out of the passages. There is nothing more common in the post-mortem room than to see the kidney studded over with minute deposits of uric acid, and I am firmly convinced—for I think I have seen evidence of it clinically—that free water-drinking performs an even more difficult task than that of flushing out sand from the passages, viz., that it softens and disintegrates small calculi. I daresay that we have some of us seen small calculi passed after this treatment has been perseveringly adopted, and I once made a post-mortem examination in a case that had been undergoing this treatment, and the stone was found soft and sabulous, so that it could be crushed to powder under the finger. To be fair, I suppose it is possible that the unbeliever might say that the stone was in course of formation, not of softening, but I think the probabilities were the other way. This point is surely worth insisting upon in these days of energetic surgery. Not long ago a friend of mine came to me with well-marked renal colic. I put him on the water cure and told him to drink it for some months, but he was a nervous, plucky, excitable fellow, and as his attacks of pain recurred he decided to be cut. He was cut and no stone was found, and three or four days after he passed his stone per vias naturales.

But although the human body is often astonishingly accommodating, it cannot be but that a sudden change such as the introduction of five or six pints of saline water, must necessitate some complicated adjustments in its arrangements, and there are likely to be other results in addition, and too often in place of, the mission on which we send it. Ah! there lies the whole crux of medicine, or of the treatment of disease, rather. These teeming kilns, each busy with its own work, although linked to each other in one whole, the body corporate, will each go its own way and our special purpose is too often dissipated in the doing.

There are, of course, other most important conditions to be considered in estimating the value of water proper—for instance, what a Turkish bath does, with the delicious sense of languor that follows it and the brightness and freshness that come after; this is often exactly reproduced by a course of waters. Then there is the change of scene, of climate, and of diet. These are very important factors, but they are on the surface, and I need not dwell on them. And while I am on the subject of water-drinking it may not be inapposite to say that the question of hard or soft water if taken freely, is probably not an unimportant matter to the standard of health. There is a common belief abroad, I think, that hard drinking waters are detrimental to health and I am very much inclined to take that view myself. But unfortunately it is one of those questions, like that of climate, which are exceedingly difficult to obtain precise facts about. Still, if it be true, as many think, and the history of goitre seems to prove, that there are dangers in the habitual use of hard waters, it at any rate may go to suggest that copious libations of any waters impregnated with saline products may possibly also lead to detrimental results from too indiscriminate use.

But I must be drawing to a close. In doing so, let me summarise a little, for I fear that my thoughts have tumbled out somewhat disjointedly. My contention is that uric acid is a common product that may well be considered as the ash resulting from the workings of our many-chambered kiln, and that the fault, if fault there be, lies not in the ash, or even in the coal from which it is produced, but in the driver, or in this case the driving power, that should regulate the process of combustion. And though this sounds vague, as indeed in the present state of our knowledge it is, it does not necessarily follow that it is any the less true. The uric acid passer invariably presents to you a problem to be unravelled, and each case a problem more or less distinct and separate from every other. In one case the cause may be the visceral sluggishness that is the common outcome of nervous exhaustion; in another, the hereditary condition, whatever it be, that determines gout, and which certainly works out its mission independently of any dietetic indiscretions, for how often we hear the lament from such, "Well, I never earned it." In another it may be a great or sudden shock, a great anxiety, an exhausting attack of illness; in another some early defect of the kidney; in another case perhaps all we can say is that it appears to be the first indication of the growing old, and of the failure of the organism to accommodate itself sufficiently rapidly to various changes of its environment, whether they be climatic or dietetic or what not, which is one of the chief distinctions between healthy youth and age. These are the things that determine the verve of our several organs, and these, therefore, are the prime movers in the production of uric acid. No doubt all these things are wanting in precision and tangibility, but they are none the less the causes of disease. To wash out a mere chemical product might seem a much easier matter and what is called a good working hypothesis, but what about results? Well, there we shall no doubt agree to differ. For myself I cannot but think that had it not been for our eagerness to get hold of something to "treat," the uric acid theory that is dominant at the present day would never have become the fetish that it has.

One of the weaknesses of our profession is this, that we incline to do too much, and in so doing over-treat disease. It is our virtue rather than our fault, for if there be any vice from which as a profession we are free it is that of the mercenary spirit, and this in spite of a certain letter that appeared in the *Times* lately. But, as you all know, the public will have physic for every ailment. We are eager to cure disease as quickly as possible, and so we often come to look too anxiously upon what are hardly more than physiological deflexions. I have often thought that we might with advantage cull a leaf out of the book of clerical customs and from time to time go into "retreat" as they call it. We might then have time to pause in the treatment of detail and to take a broad survey, each of us, of the teachings of our own experience.

Do not you find, you my hearers who have come to middle age and passed it, that one of the chief pleasures of your position is that of having a firmer conviction of the self-righting power of the human body? Let it alone; give it time, rest, freedom, fresh air. It must be so. For I hear it said on all sides of the ripe and mellow go-aheads of but a few years ago, by their juniors the go-aheads of to-day, how much less active they are than they were when they began to make their names. Yes; they now wait and watch. Alert still, but with a more chastened judgment that is well worth study. And surely this tells us that their experience has taught them to take an ampler view of the buoyancy and tenacity of life; that they have seen that many of their earlier efforts were petty interferences with greater power that tends almost inexhaustibly towards health, and "trusting the larger hope" they have shed off the immaturity of meddlesomeness.

# A Clinical Lecture

UPON

# INTERNAL DERANGEMENTS OF THE KNEE-JOINT (POPULARLY CALLED "SLIPPED CARTILAGE"), BASED UPON A SERIES OF 200 CASES.

*Delivered at St. George's Hospital*

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GENTLEMEN,—Some of you probably recollect having seen me operate a few days since upon a patient in the Fitzwilliam Ward who was generally supposed to be suffering from the results of a displaced semilunar cartilage in the right knee. The operation, however, showed that the symptoms were not due to that cause but arose from an abnormal fold of synovial membrane connected with the ligamentum mucosum which from time to time became nipped between the bones. The occurrence of this case gives me the opportunity, for which I have been for some time waiting, to call your attention to the condition of the

knee-joint—for clinical purposes indifferently styled "internal derangement," "displaced semilunar cartilage," or "subluxation"—which is not only interesting in itself, since its comparatively common occurrence brings it under frequent observation in practice, but is also well worthy of that careful consideration which is especially desirable in conditions in which, from long familiarity, the respect which naturally attaches to accepted traditional views leads to their adoption at times without much critical inquiry. Some of the conclusions in respect to diagnosis and treatment to which I shall refer in the following lecture will, I fear, be found to differ from some of the views commonly held; they are, however, the outcome of the careful study of 200 consecutive cases.

### ANALYSIS OF THE CASES.

The total number of cases in the series numbered 200 (182 males and 18 females); these included only such as presented the characteristic symptoms under discussion, all cases which could be classified under the head of "loose bodies" commonly so called being excluded. The ages of the patients varied from 13 to 62 years. The left knee was affected in 133 cases and the right in 57. The inner side of the knee was the seat of the symptoms in 155 cases and the outer side in 45 cases. 98 cases were seen after the first attack and 47 after the second; in the remainder the number of attacks occurring before the patient came under observation varied from three to 22. With the exception of 20 cases, which were too far advanced, all were at first treated by temporary rest, massage, and exercises; of these 112 were cured, 83 without the use of any support or other apparatus; in 39 temporary support was necessary for times varying from three months to one year. In no case in which the rest and massage treatment was commenced after the third attack was sufficient improvement effected to enable the patient in the absence of operation to entirely dispense with the use of support of some kind, but in a certain proportion of these the support was only used as a precaution under special circumstances. The cases in which a support was used permanently (being worn either continuously during the day only or at various intervals) amounted to 58; of these, the treatment commenced after the first attack in 25, after the second attack in 18, and after three or more attacks in 15. Three patients declined treatment altogether. Operation was performed in 27 cases (all males); of these, the semilunar cartilage was at fault in 15 only; of the remaining 12 the causes of the trouble were small pedunculated bodies in four instances and abnormal folds of synovial membrane springing from or near the ligamentum mucosum in eight. In the 15 cases submitted to operation in which the semilunar cartilage was involved the left knee was affected in 12; of the other operation cases seven occurred in the left knee and five in the right.

It is hardly needful to say that these cases do not represent my whole experience of this condition; I have, however, thought it well to confine my observations to this series, as the cases coming under my notice prior to them were not observed with sufficient care to justify any definite conclusions, although the impressions they led me to form were practically the same as those resulting from the consideration of the series under notice now.

### THE SYMPTOMS AND THEIR CAUSES.

The train of symptoms usually recognised as indicative of the lesion are precise enough—viz., sudden pain with or without a sensation of something having slipped out of place in the joint, complete fixation or limitation of the power of extension of the leg upon the thigh at any angle between complete extension and a point half-way to semi-flexion, followed by effusion into the joint with tenderness over one or other semilunar cartilage. These symptoms may occur apparently spontaneously during some normal movement or may result from a violent wrench or blow; speaking generally, rotation movement of the leg upon the thigh is a prominent factor in their causation. Relief may follow almost immediately from spontaneous reduction of the displaced or nipped structure or it may be effected by reduction by manipulation.

In some cases, principally the slighter ones, which for reasons to be stated are of extreme interest, manipulation not only fails to give relief but may cause an increase of the symptoms. It is not infrequently stated that in marked cases of displacement of the semilunar cartilage the structure can be felt upon palpation, but I venture to think that these cases must be very few in number; it is often possible to feel some fulness along the line of the cartilage, but I believe it is, as a rule, merely the swelling from blood extravasation with or without inflammatory exudation, and I am sure that the existence of thickenings of this kind is no certain sign of displacement of the cartilage. In fact, so far as I know, the only positive sign of the lesion being a displaced cartilage is the occurrence of a deficiency, upon comparing opposite limbs, felt above the head of the tibia on the affected side in consequence of displacement of the cartilage freely inwards. Projecting thickenings are no evidence of cartilage displacement, since any loose body fixed between the bones may give rise to exactly the same abnormality in outline. It is a matter of common knowledge that although the train of symptoms in these cases is so precise and clear, the causes to which they are due are by no means always the same and may be classified as follows: (1) displacement of a semilunar cartilage; (2) the nipping of folds or shreds of synovial membranes between the bone ends; and (3) loose or pedunculated bodies in the joint. To these three commonly recognised causes I venture to add (4) bruising of the peripheral edge of a semilunar cartilage and its attachments without displacement or necessarily loosening, the immediate result of the lesion being a local effusion of blood (subsequently reinforced by a certain amount of inflammatory exudation), a portion of which insinuating itself between the bone ends acts as a foreign body. To this condition I have heard no allusion made nor have I met with any mention of it in surgical literature. It is, however, I believe, the cause of the train of symptoms in the majority of the milder cases of so-called "slipped cartilage." It is quite curable by proper treatment, whilst if neglected or improperly managed at first, it leads to some of the most intractable cases of the graver sort.

In order to make my reasons for this belief clear it is necessary to refer to the following elementary points. The essential symptom in all these cases is, as everybody knows, the fixation, or at all events limitation in the movement, of the joint resulting from the existence of foreign material between the bone ends. If the foreign substance be a portion of a semilunar cartilage, loose body, or fold of synovial membrane the symptoms are very pronounced, but they disappear at once after reduction has been effected, whether the reduction occurs spontaneously or is brought about by manipulation, the movements of the joint being at once recovered. The only positive evidence of successful reduction lies in the ability to extend the leg upon the thigh without resistance as completely as in the sound limb; anything short of this is held to show that some mechanical obstacle in the way of foreign material between the bones still exists. Unless my experience is exceptional it must have been noticed by others in the majority of cases of the milder sort in which the limitation of movement is only slight that although the symptoms are precise enough the limitation in the extension of the leg cannot be rectified by manipulation, however carefully it may be carried out; "reduction" of the "displaced" material cannot, in fact, be accomplished. Not only does the inability on the part of the patient to completely extend the limb remain unchanged by the manipulation, but it will be found that even under an anæsthetic it is impossible to completely straighten the limb. It is true that if the patient whilst anæsthetised be laid on his back the limb can be put practically straight if firm backward pressure be made upon the front of the knee, but upon the removal of the pressure the knee immediately springs forward, leaving the limb bent to the same degree as before it was straightened in the manner indicated. The failure of attempts at "reduction" in these cases is due not necessarily to any want of skill in the manipulation, but to the fact that there is nothing present which in the ordinary sense is reducible. In spite of the apparent intractability of these cases at first they invariably recover completely if properly treated and do not recur. The important point to note in their progress is this: the recovery of complete extension is *gradual*, never sudden as is the case when a foreign body has been withdrawn from between the bones. In these cases the symptoms arise, I believe, from the swelling due to bruising and laceration about the peripheral margin of the semilunars and their attachments without displacement, the gradual recovery of free movement being due to the slow absorption of the effused products. The gradual way in which the normal state is regained is in itself enough to negative the existence of anything like a foreign body in

the ordinary sense of the term, between the bones, and the nature of the treatment by which recovery is brought about, added to the absence of any tendency to recurrence in properly managed cases is strongly corroborative of this contention. Additional evidence of a very positive sort is afforded by two of the cases treated by operation in the series now under consideration; these two cases were for practical purposes alike; it is therefore sufficient for my present object to give the details of only one of them.

A soldier, about 32 years old, after a wrench of the left knee, suffered from the usual train of symptoms associated with "slipped cartilage"—i.e., sudden pain, tenderness over the internal semilunar cartilage, and inability to straighten the limb completely at the knee. Attempts were made by an onlooker to "put the knee in," but without success. The patient, however, continued to get about with a partially stiff limb, and shortly afterwards, no proper treatment having been adopted, he was ordered on active service. With the knee in the condition indicated he with difficulty got through a campaign of some months' duration; from time to time after some strain or injury an acute sudden attack of pain, followed by effusion into the joint, occurred. I saw the patient about six months after the original injury; during the whole of this time the leg had never been completely extended upon the thigh. There was slight effusion into the knee with some increase of local heat; the knee was slightly flexed and could not be extended either by the patient or by passive movement. Over the middle of the internal semilunar cartilage was a spot of acute tenderness; a little fulness was also distinctly felt. From this tender spot the acute pain which followed upon any strain or other injury always started. After the treatment which I shall presently describe the knee had nearly regained by degrees its natural state, extension being almost complete, when unfortunately another strain reproduced the old condition. Subsequent attacks of the same kind followed and it was evident that unless the abnormal state could be cured by operation service in the army must be abandoned. I therefore operated with the usual precautions. The parts about the base of the semilunar cartilage inside the capsule of the joint over the tender area were swollen and infiltrated with blood (some of long standing) and exudation products. The cartilage itself was not detached and clearly could never have been displaced. Before removing the affected parts an attempt was made to straighten the limb, the capsule of course being freely open, without success. After the removal of the swollen tissues, including the portion of cartilage involved, the limb immediately fell into a perfectly straight position. A portion of the swollen mass which could be seen lying between the bones at the posterior part consisted of partly organised old blood-clot. The cartilage itself was hardly recognisable at first in the centre of the mass removed, as it had entirely lost its ordinary aspect and resembled more than anything else, both in appearance and to the touch, a piece of sodden felt; in front and behind this the cartilage differed but little from its usual anatomical characteristics. Creeping over the articular cartilage of the internal condyle for a distance of at least half an inch was a delicate layer of pink granulation tissue beneath which the cartilage was eaten away. From the general aspect of the case it was manifest that the condition, if left to itself, must have developed sooner or later into pulpy disease of the knee-joint. The altered cartilage having been removed and the bones cleared of old blood-clot and exudation tissue the wound was closed in the usual way. The progress of the case was naturally tedious and altogether caused me more anxiety than any other case of the same kind with which I have up to the present time had to deal; the final result was good and the patient rejoined his regiment in about four months.

In the other case, less advanced than the one just detailed, the condition of the parts and the appearance of the cartilage were precisely the same.

In two other cases in which a displaced semilunar cartilage had been long neglected the structure presented the same sodden, felt-like appearance. This felt-like condition seen in some of these cases is of considerable interest, as it shows without doubt, I suppose, that the cartilage must either have been completely crushed at the time of injury, had become changed in consequence of subsequent inflammatory processes, or had become altered in consequence of constant grinding pressure to which it had been subjected. Of this peculiar change in the semilunar cartilage I find no mention in the authorities I have been able to consult, but I am informed by an eminent surgeon that he has met with cases of the kind. The recognition of this bruising and laceration about the semilunar cartilage without displacement as a cause of the symptoms commonly associated with "slipped cartilage" is of considerable moment in the treatment of such cases, as will presently be seen.

## TREATMENT.

This may be conveniently considered under three heads: (1) the treatment by temporary rest, massage, and exercise; (2) the treatment by the use of apparatus; and (3) the operative treatment.

1. *The treatment by temporary rest, massage, and exercise.*—The views of surgeons with regard to the best method of treating these cases naturally differ. In the present lecture I propose merely to give the details of the measures which in my hands have proved the most successful. The first indication obviously in every case is the replacement of the structure apparently dislocated, if reduction has not already been effected either spontaneously or by manipulation prior to the patient coming under observation. The desirability of using an anæsthetic in attempts at reduction must depend partly upon the nature of the case and partly about the disposition of the individual concerned. The actual mode of procedure in attempting reduction it is superfluous to describe here. In exaggerated cases—i.e., those in which there is complete fixation or great limitation of extension movement—reduction must be effected by repeated efforts if a single attempt fails; in the slight cases (those which I venture to classify as bruised or lacerated cartilage and attachments) it will be found that the power of complete extension cannot be suddenly restored by any manipulations. In such cases, a thorough attempt at reduction, if need be under an anæsthetic, having been made without restoring the complete extension movement at the knee-joint, no repetition of the attempt should be made since there is nothing to replace. The failure to appreciate this fact, resulting in repeated futile attempts at replacing the structure which is supposed to be displaced, has been the cause of some of the worst cases of traumatic arthritis of the knee-joint with which I have had to deal. The immediate treatment of all cases, whether they are those in which movement has been restored spontaneously or by manipulation, or whether they be of the kind in which some slight flexion exists in spite of attempts at reduction, is complete temporary rest by fixation of the joint on a light splint, a compress of warm water, or, as I prefer, since it is more soothing, one of hot lotio plumbi cum opio, being kept continually applied. The period during which this rest is maintained varies from four days to a week, the time, in fact, which is usually occupied in getting rid of the effusion into the joint. The less the joint is subjected to movement until all effusion has disappeared the better is the chance of a perfect result finally. I am certain from my own personal experience and from what I see and hear of the results of the practice of others that nothing militates against a successful end in these cases so much as the use of exercises, passive or in the gymnasium, immediately after the injury; it is, in fact, in my opinion, quite the worst practice that can be adopted, since the commencement of exercises immediately as is recommended by some, is, I have no doubt, at least as bad as the opposite extreme in which a limb may be crippled by being kept at rest too long.

Although no movements of the joint should be commenced until all effusion has gone massage of muscles and joint *without movement* cannot be commenced too soon; not only does the early massage expedite the disappearance of the fluid more than any other means, but it seems to check, if not to altogether prevent, the rapid muscle waste, and, most important of all, it greatly obviates *the tendency to flaccidity of the capsule of the joint which is such a fruitful cause of failure in these cases.* Nothing is more striking, I think, than the rapidity with which the muscles of the thigh and, to a less degree, those of the leg waste if left to themselves in this injury. In my cases, therefore, from the first during the temporary rest the limb is subjected to thorough massage without knee movement daily and if the circumstances admit twice a day. Upon the disappearance of the effusion, which in well-managed cases is rarely later than a week from the time of the injury, exercise by passive movement is commenced, *care being taken that no rotatory motion is imparted to the*

*leg*—the avoidance of rotation is the essential point in these early movements; in the gymnastic treatment this cannot be with certainty achieved. The rotation movements which are inevitable in the voluntary exercises commonly prescribed directly bring about a looseness of the cartilage in the cases which originally are merely bruises or lacerations of attachments only, and in those which originally were displacements they tend to produce recurrence of the condition more certainly than any other means. It would be easy to give many examples in illustration of this point, but the one which follows will suffice.

A soldier, aged 42 years, had an undoubted displacement of the left internal semilunar cartilage; this was replaced soon afterwards by the practitioner who was at first consulted and the ordinary exercises of the gymnasium were at once prescribed. At the end of a week the displacement recurred; the pain was intense, complete extension being impossible; reduction was attempted but apparently without success, as no change in the condition of the limb followed. The exercises were continued and as much walking as possible was recommended. Six weeks later I saw the patient, the leg was then considerably flexed and could not be extended by manipulation, the knee was distended and the pain on walking was acute. Rest for a fortnight with massage without exercise removed the fluid and reduction occurred spontaneously whilst turning in bed. Recurrent attacks followed and ultimately I removed the portion of the semilunar cartilage concerned. Not more than half an inch of the anterior end was detached and I am strongly of opinion that if the case had been treated upon the lines which I recommend no operation would have been necessary. The object of the temporary fixation and massage is first of all to remove the fluid and secondly to allow the loose portion of the cartilage to fall back and adhere in its normal site which, with the help of the surrounding inflammation which almost always follows to some extent, it will generally do. The passive movement without rotation, whilst it does not disturb in any way the process of refixation, prevents any troublesome adhesion in the joint itself.

It is interesting, perhaps, to mention here with reference to what has just been said about the effect of inflammation in the refixation of a loosened cartilage that, so far as my experience goes, the cases in which the inflammation following immediately upon the injury is somewhat acute show less tendency to recurrence of symptoms, when the condition is adequately treated, than those in which the immediate inflammation is very slight or non-existent, which, if my view of what occurs is correct, is precisely what would be expected. At the end of a fortnight pedal exercises may be freely used, the massage being continued, and at the end of three weeks from the date of injury the patient, who has up till then been walking with a "stiff leg," begins ordinary walking exercise. The time during which the massage must be continued varies in different cases from three weeks to six months or possibly more. The time for its cessation is determined by the condition of the thigh muscles and of the *capsule of the joint*. Speaking generally, it may be said that in no case can it be considered safe to dispense with the treatment if the thigh muscles remain wasted or if the capsule is lax, the latter condition, which is practically dependent on the former, being the more important, as the lateral movement or "wobbling" of the joint which is associated with it is directly conducive to recurrence of the trouble in the articulation.

The importance of restoring the proper tone or tension of the capsule of the knee-joint in these cases is, I believe, not sufficiently appreciated, nor do I think the means of effecting this end are altogether a matter of common knowledge. It is too commonly known, I suppose, to need emphasis here that the normal tension or "tone" in the capsule of the healthy knee is greatly dependent upon the muscles in the thigh proper which send expansions to it, notably the quadriceps extensor. A factor, however, of prime importance in this matter is one which, judging from the way in which the treatment of these cases is frequently conducted, is not always held in sufficient esteem—I mean the ilio-tibial band, the elastic tension of which is upheld by the gluteus maximus and the tensor fasciæ femoris. It will be found in the majority of, if not in all, cases like those now under discussion, when the knee capsule is very lax and the lateral movements of the knee are excessive, that there is marked wasting of these two muscles. Although much attention is generally paid to the wasting of the quadriceps extensor and to attempts at the restoration of its normal condition I do not remember having seen attention called to the wasting of the muscles connected with the ilio-tibial band. The practical importance of this point to which I particularly wish to direct attention is this. In attempting the restoration of the normal tension of the knee capsule by massage and exercises the treatment must not be limited to the obviously wasted muscles in the thigh—the quadriceps extensor, for example—but should be applied with equal vigour to the muscles connected with the ilio-tibial band, the gluteus maximus, and the tensor fasciæ femoris. The method which I have given in detail is that which I have come to believe to be best for the management of the cases now in view if a cure in the true sense is aimed at. I am well aware that in many instances the method must be too expensive and possibly from the patient's point of view too tedious to be practicable. Such cases should be managed with as little modification of the plan described as circumstances allow, the essential points of the immediate treatment—viz., temporary rest for the joint and avoidance of rotation movement—being especially borne in mind.

2. *Treatment by the use of apparatus.*—On this head little requires to be said. No support or apparatus of any kind should be employed unless absolutely unavoidable; moreover, the use of instrumental support of any kind in the case of a patient whose treatment has been commenced immediately after the receipt of the original injury must, excepting in a few special circumstances, be held to be sure evidence of the failure of the treatment primarily adopted. It cannot be too strongly emphasised that the use of artificial supports always tends to render permanent the wasting of the thigh muscles to an extent which varies in degree with the kind of instrument employed. The cases in which the use of supports is justifiable are limited as follows: (1) cases in which for unavoidable reasons the rational treatment cannot be carried out; (2) cases in which the rational treatment fails to restore the normal tension of the knee capsule or those in which abnormal lateral mobility remains to any marked extent in spite of the treatment; and (3) cases in which recurrent attacks of semilunar displacement have occurred frequently, operation having been for some reason rejected. When the symptoms point with reasonable certainty to the existence of a loose body other than a displaced cartilage the use of a support is obviously useless, operation being the only method which offers a prospect of relief. In the event of the use of a support being, for sufficient reasons, decided upon it is of importance that it should be constructed on proper principles; all the ordinary "knee-caps," whether of elastic or inelastic material, are to be avoided, as, whilst they do not in any sense provide the means for acquiring the desired end, they tend more than any other contrivance to increase and perpetuate the wasting of the thigh muscles.

The object to be attained by artificial support is the prevention of rotation of the leg at the knee—to reduce, in fact, as much as possible the knee to the condition of a true hinge; in the manufacture of these instruments this salient point is the principal factor to be kept in view. It is too often thought that a truss or pad may be made, by the pressure of which a semilunar cartilage can be kept in its proper site. A moment's consideration will show that this is impracticable, especially in the face of the fact that in these cases of loosened semilunar cartilage the displacement is generally inwards towards the articulation—a direction upon which an external pad could by no amount of ingenuity be made to bear. All that can be accomplished by properly devised instruments is the gripping of the head of the tibia with a view to the prevention of rotation, and I am acquainted only with two appliances which reasonably effect this purpose, one being complicated and expensive, whilst the other is comparatively simple and inexpensive. So far as the effect is concerned I do not know that the one is better than the other. The small spring "trusses" sometimes supplied are entirely useless.

### THE OPERATIVE TREATMENT.

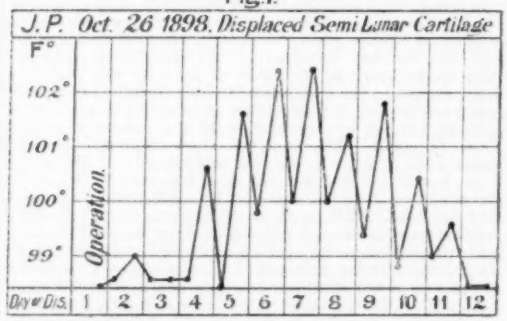
With regard to the propriety of the removal of displaced or loosened semilunar cartilages there appears even now to be some divergence of opinion, for whilst some surgeons, the majority I suppose, think removal the only practical plan of treatment in certain cases, others adopt the opposite extreme and incline to reject the operation altogether; indeed, some appear to think it an unjustifiable mutilation. For my own part I believe that no operative measures in these

cases short of removal of the offending cartilage is efficient and there is no doubt that if necessary the cartilage can be removed with advantage; indeed, in some cases its removal affords the only possible means of providing a workable joint, and I have certainly seen no reason to believe that any defect in result after operation arises from the mere absence of the cartilage. At the same time I am of opinion that the percentage of cases in which operative measures of any kind are necessary in cases presenting the recognised train of symptoms should be very small indeed if the original treatment has been properly managed. Under any circumstances, I am sure that operative measures should, speaking generally, be postponed until all other treatment has failed to satisfy the patient. If the original treatment is rationally conducted I further believe that operations in these cases would be found to be limited for the most part to the removal of pedunculated bodies and synovial folds. The semilunar cartilages would rarely require operative interference.

The fact that it is practically impossible, excepting in those unusual instances in which the cartilage can be felt to be absent from its normal site, to determine what is the real cause of the trouble in these cases without opening the joint renders exploratory operations in intractable cases obviously desirable, but having regard to the large percentage of cases which are curable without operation the explorations should in my opinion be reserved for (1) cases in which non-operative measures have conclusively failed to cure or sufficiently modify the symptoms to satisfy the patient; (2) cases in which general flaccidity of the joint, as shown by an abnormal amount of lateral movement upon manipulation, is in excess of the other symptoms. (I have already indicated the important part which this flaccidity plays in the ultimate result of the treatment of these cases and the strongest indication for exploratory operation is afforded, in my opinion, by progressive looseness of the joint generally; it is at the same time well to note that these loose joints, especially if the lesion involves the semilunar cartilage are those in which the tendency to defective results is strongest); (3) cases of expediency in which an early attempt at relief is urgently called for by special circumstances, such, for example, as may be the case of a soldier or any person in the public services to whom the persistence of a physical defect may entail the relinquishing of his career, or in the case of gymnasts and the like; and (4) grossly neglected cases in which from long-continued inflammation the joint has assumed the aspect of pulpy disease. Such cases are, however, rare and, indeed, in the true sense are outside the category both clinically and from the operative aspect of those now being discussed.

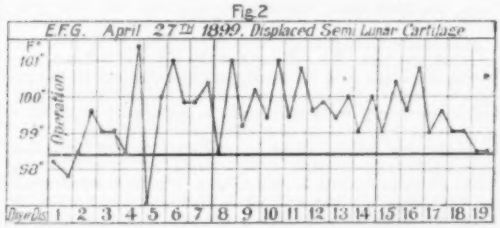
The reasons for restricting operative treatment to such a comparatively small number of cases are the following: 1. The vast majority of these cases are, I believe, curable by the means already indicated, and of the remainder many, although not curable in the true sense, can with or without suitable apparatus be made of so little inconvenience that the majority of patients are too well content with their condition to submit to the inconvenience, accidental risk, and expense of an operation the result of which may, after all, be disappointing. 2. The operative measures necessary for dealing with these cases when the semilunar cartilage is the structure at fault cannot be regarded as entirely free from risk. It is, I believe, a fact that although opening the knee-joint for the removal of loose bodies or synovial folds is rarely, if ever, followed by anything but uneventful recovery in competent hands the removal of a semilunar cartilage is by no means so free from subsequent trouble as is generally imagined or as would be concluded from a perusal of recorded cases, and I cannot but believe that if the results of all the cases operated upon in London in the course, say, of any five consecutive years could be forthcoming the general estimate of this operation would be lower than it at present is. Although up to the present time I have had no disaster after opening the knee-joint with the exception of one instance in which direct septic infection occurred from accidental causes entirely beyond my control in a case not included in the series now under consideration because it was of a different kind, I must admit that two of the present cases were the cause of much anxiety. The temperature charts of these cases are appended; no suppuration occurred and no active measures were necessary, but it would be idle to deny that during the periods covered by the charts these patients were in a somewhat critical condition so far as the utility of the joint (and perhaps the integrity of the limb) was concerned. It is at the same time noteworthy that the results of these cases ultimately proved to be the most perfect of the series of those subjected to operation. Under any circumstances, however, the risks are, of course, comparatively small and mainly accidental, but they are, I submit, sufficient to merit consideration in the discussion of the

Fig. 1.




*pros* and *cons* of this operation, which I venture to think is occasionally too lightly undertaken. 3. The results of operation are not always perfect. Apart from cases in which failure is complete—viz., those which end in a completely stiff joint or possibly the loss of the limb—there is undoubtedly a certain percentage of failures from (1) recurrence of the symptoms and (2) partial stiffness of the joint.

Fig. 2.


E.F.G. April 27th 1899. Displaced Semi Lunar Cartilage
F°
101°
100°
99°
98°
Operation
Day of Dis.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19

Of the general proportion of these failures it is of course impossible to acquire accurate knowledge; but in my series of *removal* of the semilunar cartilage recurrent symptoms occurred in one and some slight limitation of movement in one, whilst in the two cases in which the cartilage was *fixed by sutures* the symptoms recurred in less than a year from the time of operation.

It is conceivable that it may be submitted, and indeed I have heard it suggested, that in exaggerated cases even if a stiff limb results after operation the patient's condition is not only no worse but really better than before; admitting, for sake of argument, that this may be so in some cases it cannot be urged that the result is anything but failure in the case of an operation performed with the express object of providing a normal joint. To deliberately produce by operation a stiff limb may in some of the cases be proper enough under certain circumstances, but to regard a stiff limb as a satisfactory result of an operation performed with the sole object of giving a freely moveable joint is hardly rational.

With regard to the method of operating I have found the vertical incision (converted, if necessary, into an L-shape) all that is requisite to give access to the part and I confess that I am at a loss to understand the reason for the extensive transverse incision, including of course the division of the patella, which is now advocated by some. The operation performed in this way seems to be unnecessarily severe and must, *cæteris paribus*, tend to interfere more with the subsequent perfection of the joint than the simple longitudinal incision could possibly do. Moreover, so far as I have seen, no very extensive exposure of the joint is necessary in these cases; the localised symptoms indicate

very clearly the seat of the trouble which is readily accessible through a moderate incision. In the case in my series in which after removal of the offending structure recurrent symptoms occurred it was suggested that the recurrence was due to some fold having escaped notice in consequence of the exposure of the joint cavity having been insufficient, but at the second operation it was clear that this was not the case, as the cause of the recurrent symptoms was a growth of tissue into the joint from the line of the division of the synovial membrane at the previous operation.

There can, I think, be no doubt that the success of the operation depends more upon the management of the case before and after the treatment than upon any special method of operating. The following plan of management will, I believe, be found to produce the best results; it was followed in all the cases now mentioned excepting that in which some limitation of movement occurred. The patient is kept in bed for a week prior to the operation, daily massage without passive movement is used, and no thought of operation is entertained until all fluid in the joint has disappeared. To operate in the presence of fluid in the joint is, I am sure, quite unjustifiable. After the operation, unless pain or other unforeseen conditions are contra-indicative, massage of the limb generally above and below the knee is commenced, the dressings, of course, being left undisturbed. Gentle passive movement of the patella in order to prevent it becoming in any way fixed, one of the most important points in the subsequent progress of the case, is commenced not later than on the fourth day, the outer dressings being if necessary removed daily for this purpose. At the end of a week passive movement of the knee is generally commenced and can as a rule in ordinary cases be carried out by the patient, the splint being removed for a short time daily. To the constant use of skilled muscle massage I attach great importance for reasons already discussed in connexion with flaccidity of the joint capsule, upon the presence or absence of which depends to a very large extent the failure or success of the case. In connexion with the progress of the cases after operation, when the semilunar cartilage itself is dealt with, an interesting point is afforded by the variability in the course of the cases during the first week which in the majority is unattended by pain or discomfort of any kind, there being neither effusion nor other objectionable development. On the other hand, pain with or without effusion in some cases is intense, the temperature at the same time perhaps rising to a serious degree. I have rarely, I think, seen more severe pain than that suffered by one of my patients, although the joint did not become tense and the temperature did not reach a higher point than 99·2° F. In two other cases the pain was extreme, indeed almost intolerable; in each of these some tension of the joint arose, the effusion in each commencing at some time during the third day. The bulk of this pain seemed to be due to, or at all events to be greatly increased by, muscle spasm or cramp both in the leg and thigh, which could only be relieved by gentle smooth massage, during which the patient would often fall asleep. It is perhaps worthy of note that the cases in which these apparently unfavourable symptoms developed produced ultimately the most perfect results which I have had, the joints in all being finally perfectly normal in every sense of the word. This effusion coming on several days after the opening of the joint must, I assume, be due to inflammation, and I am inclined to think that a certain amount of inflammation, provided, of course, that it subsides before harm is done, is advantageous, as it is, I submit, not unlikely that the inflammatory process may tend to fix any loose parts in the operation area which in the absence of inflammation may by reason of their looseness give rise to recurrent symptoms. In this connexion it is significant that of all my cases the one which made the most rapid and perfect progress so far as absence of discomfort was concerned was that in which recurrent symptoms followed upon the removal of the anterior two-thirds of the left semilunar cartilage.

In conclusion, it is fair to allow that, having regard to the admitted comparatively slight risk of these operations and the impossibility of determining with certainty the conditions at fault in the majority of these cases without opening the joint, it may be with reason submitted that a more rational plan than reserving the operation as a last resource or at all events postponing it until other means have failed would be to first perform the exploratory operation and then proceed with the treatment indicated by the circumstances revealed. My objections in this connexion are mainly two. In the first place, I do not think that the measures at our disposal are sufficiently certain to admit of the performance of these operations with entire impunity, and in the second place I cannot admit that the possibility (thanks to the antiseptic system) of operating without risk other than that which may be regarded as accidental is in itself any justification for the performance of operations in cases in which there is certainly a good chance in the majority of attaining the end in view without operative interference. This latter aspect of the question is, I believe, worthy of special consideration at the present time, when I cannot help feeling that the tendency to reduce the practice of surgery to what is little more than a mere handicraft is somewhat too strong.

# THE HISTOLOGY AND PREVENTION OF BLACKWATER FEVER.

(WITH COLOURED ILLUSTRATION.)

BY W. H. CROSSE, M.R.C.S. ENG., L.F.P.S. GLASG.,
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THE disease called blackwater fever has caused, and is still causing, such serious loss of life in tropical West and East Africa that any information upon the subject cannot fail to be of interest, especially at the present time when the countries in these regions are being rapidly opened up. Blackwater fever or hæmoglobinuric fever I have previously defined[1] as "a febrile disease of malarial type, characterised by hæmoglobinuria, jaundice, and vomiting." As bearing upon the histology of this disease a description of a case which came under my notice, and which I was enabled to examine post mortem, may perhaps add something to our knowledge.

A man, aged 26 years, had resided in the Niger territories for 16 months, this being the first time he had been out of England. He came of a neurotic stock but had been passed as sound in England. His work, that of a clerk, necessitated a considerable amount of exposure, both during the heat of the day and the chill of the evening. He was very "slack" in his care of himself—that is, he often went out into the sun without using a sufficient protection for his head, and if his clothes became wet either through free perspiration or actual wetting he often neglected to change them at once. He was a heavy smoker, but in other things was quite moderate. As the result of his "slackness" he frequently took chills, and as his work lay altogether on the lower 300 miles of the Niger territory, where mosquitoes abound, he was doubtless frequently bitten by them. He took quinine only when he felt that he needed it and not at all regularly. About six weeks after his arrival in the territories he had his first attack of malaria and from that time he had an attack about every month. Some of these attacks were probably relapses rather than fresh infections. For two or three days before he was laid up with what proved to be his last illness he had been cold, but he kept to his work. On the day following that on which he really laid up he complained of nausea. There was much fever and chilliness, his skin was noticed to be yellow, and his urine was "porter-like." He was put on board a launch and was brought a day's journey down the river to me. When I saw him he was deeply jaundiced, his urine was hæmoglobinous, and he was suffering from persistent vomiting, the vomit being markedly green in colour. The urine rapidly diminished in quantity and the patient died on the sixth day after the hæmoglobinuria first set in; the vomiting persisted to the end, and was accompanied by a most distressing hiccough and by some dyspnœa and pain in the limbs. Pieces of the various organs were obtained, and these have been cut and stained by my friend, Dr. T. G. Stevens, to whom I am indebted both for the descriptions and for the illustrations.

### HISTOLOGICAL EXAMINATION OF ORGANS.

*Kidney.*—Sections were cut in paraffin, stained with Ehrlich's hæmatoxylon and counterstained with "Licht

[1] Blackwater Fever: Transactions of the Epidemiological Society 1898-99

Grün." The sections do not show any very advanced change; there is, however, some necrosis of the epithelium of the convoluted tubules and Henle's tubes. The necrosis is superficial only, filling the lumen with granular débris. The nuclei of the necrotic cells do not stain well, they seem to be fewer in number, and are breaking up. There is no interstitial change and the glomeruli are unaffected. There are no hæmorrhages or deposition of pigment. The changes described are consistent with an early parenchymatous nephritis.

*Liver.*—Sections were cut in paraffin, stained with Ehrlich's hæmatoxylin and counterstained with "Licht Grün." The sections show very conspicuously the pigmentation of the hepatic cells. The pigment is distributed fairly evenly in all parts of the lobules. The granules of pigment vary somewhat in colour from pale yellow to brown or almost black. The pigment is contained in the general protoplasm of the hepatic cells, not in the nuclei. In the capillaries are to be seen endothelial cells also containing similar pigment and pigmented leucocytes. In addition to this pigmentation the capillaries between the hepatic cells are dilated throughout the section. The capsule of the organ is thickened. There is no increase of connective tissue in the substance of the liver.

*Spleen.*—Sections were cut in paraffin and stained with Ehrlich's hæmatoxylon. The sections show a widely spread and advanced degree of fibrosis. The capsule and trabeculæ are much thickened and fibrous and devoid of nuclei. The stroma of the pulp tissue is considerably increased. Scattered throughout the section are seen masses of pigment of varying size and colour, the colour being bright yellow or brown to almost black. The pigment is apparently in leucocytes and also lies free among the cells. The larger masses of pigment are found in the Malpighian bodies. The smaller vessels have a very marked thickening of their sheaths; the walls are degenerate and have very few nuclei; the lumen is much reduced or even obliterated.

*Cerebrum.*—Sections were cut in paraffin and stained with borax methylene blue. The sections show no definite changes; there is no deposition of pigment. The vessels appear to be normal. Owing to the long maceration in spirit which probably on account of climatic conditions on the Niger was not absolute, the capillaries of the cerebrum have no complete blood corpuscles in them, but only some granular débris. Under these circumstances it is, of course, impossible to demonstrate the malarial parasite which in these cases is said to be found in the capillaries of the brain. About a dozen sections in all were examined, but no satisfactory corpuscles were found.

It will be seen that so far as one can see the above-sections show nothing that cannot be found in the tissues of a patient who has had several attacks of malaria. It would appear, however, that it is possible for a patient to have had malaria many times and yet show no pigmentation of any organ except the spleen. In two of the cases of blackwater fever published by Koch[2] he states that both patients had repeatedly suffered from fever which reacted to quinine; in one only the spleen showed pigment granules and in the other he states: "The deposit of pigment in the endothelium of the spleen and liver, so characteristic of malarial disease, was likewise lacking."

Before discussing the prevention of this disease it will be necessary to say—even at the expense of repetition—something concerning its cause. Last December Mr. W. C. C. Pakes and I[3] suggested that blackwater fever bore to malarial fever a similar relation to that borne by hyperpyrexia to rheumatic fever. I should like in the first place to examine Koch's cases. 1. It is strange that, although Koch inquires, "Therefore how can one still assert that blackwater fever is caused by malaria parasites?" in all his cases which have so far been published, in the *Journal of Tropical Medicine* there is a definite history of previous malarial attacks. 2. In all the cases except No. 7, where the patient had taken quinine, he took it because he felt unwell. In Case 7, although the patient felt well on the morning upon which he took the quinine, he had had intermittent fever for the preceding few days. 3. The cases of hæmoglobinuria published by Tomaselli which were caused by quinine did not, so far as I can make out, resemble blackwater fever in any other respect than in that of the presence of hæmoglobinuria. 4. If blackwater fever is, as Koch maintains it is, an intoxication by quinine no case of the disease could occur unless the patient had taken quinine. But I have already published a case[4] where the patient had no quinine until he had developed well-marked blackwater fever. 5. Koch concludes that "the lack of parasites in more than half of all cases, and the omission of the relapses would alone suffice to prove that blackwater fever itself cannot be malaria, but that it is pretty frequently associated with malaria." The lack of parasites during and subsequent to an attack of blackwater fever is of course well known, but I cannot see that any of these cases were examined for parasites *before* the attack of blackwater fever. The absence of relapses is to my mind very inconclusive since he makes no mention of the time during which they were under observation or of their surroundings during that time. It is not at all rare to find that a patient may be quite free from relapses of malaria for many months—in fact, there seems to be no doubt that some cases undergo a spontaneous cure. In short, I see no reason yet to modify the view which we suggested—that it is a complication of malaria. I quite agree to describe the condition as an intoxication, but of malarial origin.

The following case which I have recently had under my care is of great interest chiefly from the reason that I saw the patient before the attack of blackwater fever commenced.

A man, aged 22 years, had been to West Africa twice; during his first stay he had an attack of blackwater fever and he was quite recently invalided home for the same complaint. He arrived home in bitter weather and came to see me as he had felt unwell and chilly for two or three days, but during this time he did not lie up. I took several specimens of his blood and examined them. Some of the specimens were stained with carbol-thionin blue and others with eosin methylene blue. The hæmatozoa, which were fairly numerous were seen to be in two stages. All but two were about one-third of the diameter of the red disc in size, circular, oval, or in the shape of a signet ring and without pigment. The discs were not enlarged and the portions not occupied by the parasite took the eosin stain well. The two above mentioned were larger, occupying about two-thirds of the area of the disc (which, however, was not enlarged), with irregular edges and with several granules of pigment scattered throughout the hæmatozoon. On the same evening he went to a theatre, but feeling very ill went home, where upon his arrival he vomited. In consequence of finding parasites in his blood nine grains of the hydrobromate of quinine were taken by him after his return from the theatre. He had taken no quinine for at least a week prior to this dose. On the following morning he looked slightly jaundiced and vomited bile-stained mucus. At noon he passed some very dark-red urine which was collected. At 3.30 he again passed dark-red urine and at 8 P.M. the urine had become normal in colour. Specimens of his blood were again taken. The urine was examined for me by Mr. Pakes who reported as follows. Specimen 1, collected at noon: Albumin, large amount; sugar, absent; and bile, present. The colour was due to the presence of hæmoglobin—not methæmoglobin—and the urine gave a very strong urobilin band. Under the microscope hyaline and granular casts were found as well as some renal epithelium. Spermatozoa were very numerous and there were a very few red blood discs. Specimen 2, collected at 3.30: This specimen was practically identical with No. 1. The red colour was certainly hæmoglobin. There were perhaps rather fewer casts and rather more red blood discs, but the difference was only slight. Specimen 3, collected at 8.0 P.M.: Albumin, faint trace; sugar, *nil*; and bile, *nil*. No hæmoglobin band could be found, but the urobilin band was still very marked. Microscopically neither red blood discs, casts, renal epithelium, nor spermatozoa could be found. On the following day the patient had a slight relapse of the hæmoglobinuria and he felt somewhat chilly. I therefore gave him more quinine and he rapidly improved. Three days later specimens of blood were taken, and also six days later. The specimens of blood taken whilst he actually had blackwater fever and those taken three and six days later were examined both by myself and by Mr. Pakes, but we failed entirely to find either amœboid or crescent parasites.

[2] An account of these may be seen in the Journal of Tropical Medicine 1899).

[3] Transactions of the Pathological Society, 1898-99.

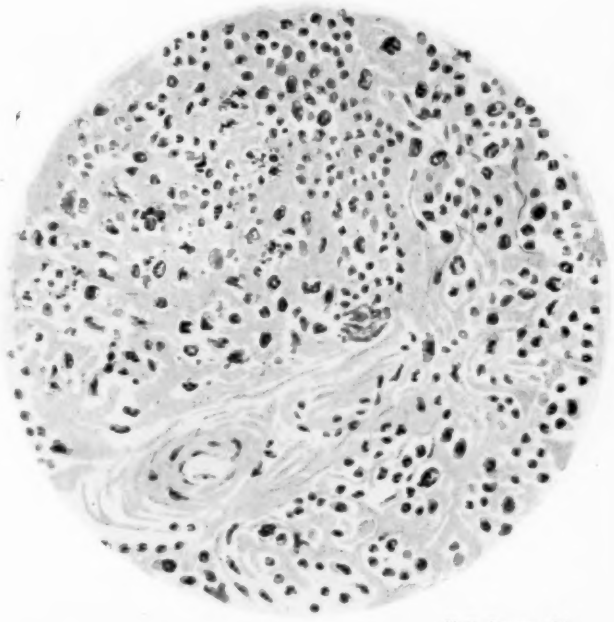
[4] Transactions of the Epidemiological Society, 1898-99.

Fig. 1.

*T. G. Stevens, del.*

I. Section of liver showing an intra-lobular vein in the centre with dilated capillaries around. The liver cells show the pigmentation described in the text.

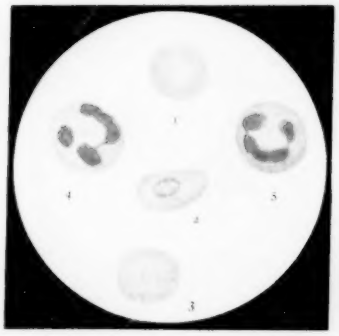
Fig. 2.



*T. G. Stevens, del.*

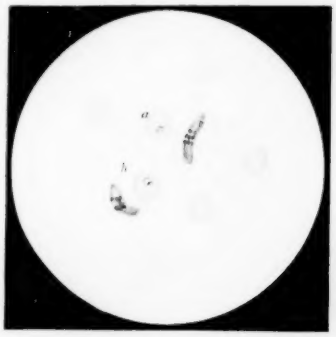
II. Section of spleen showing the pigment lying free among the cells of the splenic pulp and also here and there in leucocytes. The fibrosis of the trabeculæ is also shown.

Fig. 3.




III. Drawing of blood from a case of blackwater fever showing a ring-shaped parasite inside a red blood-corpuscle (2). Also two normal red blood-corpuscles (1 and 3) and two leucocytes which are overstained with eosine (4 and 5).

Fig. 4.




IV. Drawing of blood from a case of malaria, showing ring-shaped parasites in red blood-corpuscles (*a* and *b*) and two crescents. Stained eosin and methylene blue.

Fig. 5.

V. Drawing of blood from a case of malaria, showing ring-shaped parasites in red blood-corpuscles (*a* and *b*) one crescent and two leucocytes stained by the carbol-thionin blue method.

TO ILLUSTRATE MR. W. H. CROSSE'S PAPER ON "THE HISTOLOGY AND PREVENTION OF BLACKWATER FEVER."

The precautions necessary for the prevention of blackwater fever may be therefore divided into two classes: (I.) Those necessary for the prevention of malaria; and (II.) those necessary for the prevention of blackwater fever in malarial subjects.

### I.—THE PRECAUTIONS NECESSARY FOR THE PREVENTION OF MALARIA.

Since Ross's discovery that the mosquito is one of the causes of the spread of malaria it becomes necessary to take precautions against being bitten by mosquitoes. In malarious countries swampy land should be avoided as much as possible and houses should be built at a distance from the haunts of the mosquito. Mosquito-breeding pools and puddles should be filled up and drained or treated with kerosine or other oil, as has been suggested. In the part of Nigeria where I resided to do this efficiently would be an almost hopeless task, for, firstly, in the delta regions the rainfall is enormous, the land is only slightly raised above high-water mark, and it is frequently submerged; it is also intersected by a perfect network of creeks, streams, and puddles and is covered with a jungle so dense that native paths are only made and kept open with very great difficulty. In such a country even the most heroic measures would avail little. Secondly, as the land for hundreds of square miles is only slightly raised above high-water mark drainage obviously would be exceedingly difficult. Thirdly, any treatment of the mosquito-breeding pools with kerosene in regions like those forming the delta of the Niger would involve the expenditure of fabulous sums and Herculean labour. For these and other reasons very little can be done in the way of destroying mosquitoes by the above methods except in the immediate neighbourhood of European houses.

It seems to me that perhaps the only way in which we can hope to stamp out the mosquito is by introducing into the countries which it inhabits some animal which is inimical to it. A statement made to me by Lord Bennet appears to be worthy of mention here as possibly indicating the means which might be adopted. He says: "In the western States of America and in Canada there is a red parasite which destroys mosquitoes and almost exterminates them about the middle or end of July. ..... The parasite is well known both in Ontario (away from towns) and in Washington State. I have found the parasite as early as the beginning of June." Doubtless there are many who are capable of giving us definite information as to the nature and habits of this parasite, if parasite it be. If therefore those who can will give us this information we shall be able to judge as to whether it would be possible or advisable to introduce this or some similar parasite into malarious regions. In addition to the well-known general precautions I should add that I consider the regular administration of quinine to be most important. My own custom has been to give five grains each day.

### II.—THE PRECAUTIONS NECESSARY FOR THE PREVENTION OF BLACKWATER FEVER.

The prevention of blackwater fever in malarial subjects resolves itself practically into two points which I shall only briefly mention in this paper. 1. The general care of health. Chills, wettings, and exposure during the heat of the day should be avoided. Quinine should be regularly taken to eradicate the parasite and so prevent relapses and to cure fresh infections. Arsenic, iron, and other drugs which help to prevent or to cure anæmia should be taken. Patients should be moved from specially unhealthy localities. Special attention should be paid to proper housing and clothing and to the regular use of mosquito curtains. Any other illness—e.g., dysentery—should be cured as quickly as possible. Strict moderation should be observed in regard to alcohol, &c.; suitable food, which should include plenty of fresh vegetables, and a pure water-supply are of importance. Depressing drugs (such as antipyrin) should be taken with caution and should in no wise be taken in the place of quinine. As frequent visits as possible should be paid to non-malarious districts or countries. 2. Return to a non-malarious climate. When it is noticed that a man is becoming anæmic and debilitated by the fevers which he gets and by the conditions under which he lives, then he should be sent to a non-malarious climate for a protracted holiday. A place should be selected which is a suitable one for the patient to go to. Recently several cases of blackwater fever have occurred in men who have arrived in England in bitterly cold weather, and I think that some of these patients might have escaped had they been sent in the first instance to Grand Canary or Madeira.

Dover-street, Piccadilly.

## THE SO-CALLED DANGER FROM THE USE OF BORIC ACID IN PRESERVED FOODS.

BY DR. OSCAR LIEBREICH.

IN a thorough investigation on the action of borax and boric acid I have not been able to demonstrate that these two bodies are included in the so-called toxic-acting substances in so far as they act through absorption from the intestine. My researches show that the misleading and frequently disseminated statements to the contrary are at present without foundation. This preliminary question must naturally be settled before the hygienic and legal aspects of the subject can be taken up—as to whether, and in what quantities, it is allowable to use these two substances as preservatives for articles of food. These questions are too often regarded, not from the purely scientific standpoint, but in the light of their value in the interest of political and agrarian parties in different countries. This is shown by the frequent republication of old and quite inconclusive investigations, particularly by the daily press, statements which are likely to mislead both legal and public opinion. It is not my intention to enter now into my investigations on this subject. These will appear in the *Vierteljahrschrift für Gerichtliche Medicin* and will shortly be published by Churchill in pamphlet form. The reason for my again taking up these questions is an article by Dr. H. E. Annett on Boric Acid and Formalin as Milk Preservatives which appeared in THE LANCET of Nov. 11th, 1899 (p. 1282). It would be quite sufficient only to criticise this investigation, but it seems advisable also to make some introductory observations.

In the first place Dr. Annett cites the following from the report of the committee of the Local Government Board: "There is no doubt that boric acid if taken in large quantities would be injurious to health, but we have not sufficient information to show whether such such minute quantities as are generally added as preservatives would be regarded as having that effect, and more exact information is wanted before it can be decided whether a process which *prima facie* may be regarded as intended to prevent the loss of valuable foods must be held to be prohibited by law." Dr. Annett adds: "It is remarkable that that 'sufficient information' on the action of minute doses of 'preservatives' habitually taken after the lapse of a period of almost 10 years is still not forthcoming." Dr. Annett is quite right. It is indeed strange that during 10 years of experimental work, taken part in by a great number of investigators it has not been forthcoming, and that during these 10 years of experience of practising physicians there has not been forthcoming any instance of injury to health from the administration of small doses of borax and boric acid. Particularly so, in my opinion, for during this time a very excellent opportunity has been afforded for practical observation, because the use of boric acid in small doses has been very extensively resorted to. This gives evidence to the experimenter that the existence of an injurious influence of small doses could only be demonstrated with great difficulty, if indeed it exists at all. One would expect that Dr. Annett had succeeded in obtaining the required proof. However, this is not the case. He begins by enumerating the injurious effects of excessively large doses in animals and confuses these with therapeutic observations. In such a scientific criticism it would have been fairer not to have suppressed the facts that excessive doses administered by the mouth cause only passing harm in man and that the injection of excessive doses of borax and boric acid in the body cavities of patients produces distinct intoxication and even death. This is well known and not to be wondered at; but from this latter fact no conclusion can be drawn as to their toxicity when administered through the stomach and intestine, for the purpose of forming a judgment on the use of small quantities for the

preservation of food. We are aware that many substances are harmless in the intestinal canal if swallowed, but that if injected subcutaneously or into the body cavities they act as poisons. Further, Dr. Annett states that the most eminent authorities of this country, who by means of THE LANCET Special Sanitary Commission on the Use of Antiseptics in Food of 1896 published their opinions on the question of food preservatives, were unanimously of opinion that the use of antiseptics in food was injurious to health. Reference to the columns of THE LANCET convinces me that this statement is totally inaccurate. It is only necessary to cite the words of two authorities. Professor Halliburton[1] says: "I and all of us are continually taking such food (especially milk treated with boric acid) without any appreciably bad results." And Professor Bradbury[2] says: "I am disposed to think that the presence of small quantities of salicylic, boric, or benzoic acids, in sufficient quantities to preserve it is not injurious to health." The conclusion of THE LANCET itself was as follows: "As will be seen from these communications there is considerable diversity of opinion as to whether antiseptics in the quantities used for preserving food are injurious to health, and also whether legislation could satisfactorily deal with the subject, although on the whole the conclusion appears to be not altogether unfavourable to the use of preservatives with certain restrictions. The majority agree in one thing, and that is that should the practice be tolerated it should be placed under some control, so that, for instance, where the addition of antiseptics is practised it should be notified to the purchaser. Very few of our correspondents, it is important to note, are able to quote cases within their experience of injury to health having been caused by preservatives in food."

One can be certain that if medical men of the standing of Dr Lauder Brunton and others had been able to satisfy themselves that the small quantities of antiseptics necessary possessed even a trace of injurious influence they would at once have concluded it was altogether better to entirely forbid the preservation of food. From the researches of this commission it can also be inferred that the authorities referred to held that it was better to preserve food with these small and non-injurious quantities of antiseptics than that any section of the public should be obliged to eat decomposing food, regarding the injurious nature of which no doubt exists. Dr. Annett quotes Binswanger also incorrectly. More extensive quotation would have clearly shown that as the result of his investigations Binswanger held that small doses of boric acid exercised not only no injurious action but so little action whatever that it was practically inert. These misquotations have already been corrected in my pamphlet, but it seems to me necessary to refer to one more important point.

Dr. Annett himself draws attention to the fact that the only direct instance of the injurious action on man of boric acid when added to milk is that recorded by Dr. A. R. Robinson[3] and referred to by Dr. Annett in the following words: "Five of the seven inmates of a certain house became suddenly ill after partaking of blancmange which had been made from milk of the previous day, to which, as was confessed, the dairyman supplying it had already added boric acid and to which the cook had added a further quantity to preserve it over-night. Nine fowls fed liberally with the blancmange became ill, five dying." From such a description it is not possible to form any idea as to what the nature of the illness of the inmates was. One may pass over the question as to what symptoms were exhibited by the hens, and what were the appearances that would have been present in the post-mortem examination (which was not made), and I put to Dr. Robinson the question if he has not observed, after blancmange, after ice, and particularly after milk, similar sudden illness without any boric acid having been present. It is not uncommon for illness to ensue if food has been kept in vessels in contact with metal, as in the case of blancmange often occurs. But the first question for a sanitary officer to settle was the mode of preparation of the blancmange. In the cookery books of different nations the ingredients are stated as follows: Milk or cream, bitter almonds, sugar, gelatin, vanilla, lemon peel, and bay laurel leaves. From this it is evident that it is not impossible that things may have been present which are known to afford opportunities for poisoning to occur. Vanilla is often such a cause, and the possibility for poisoning even by prussic acid exists through an excess of bitter almonds being used. The bitter taste of these is by no means a protection to the people partaking of the food, for the laurel leaves and lemon cannot only conceal this, but the combination with bitterness may also add an extra flavour. Also the milk may have already been poisonous before the addition of the boric acid, and it is well known that boric acid only prevents the further formation of toxic bodies without destroying those already existing. Of not one of these possible contingencies has Dr. Annett taken any account and it is now impossible to determine whether any of these same factors were present. One can, however, through investigations on hens, prove Dr. Robinson's assertion that the boric acid contained in the blancmange was the cause of the illness of the people and of the hens is without foundation. It should have been Dr. Robinson's work to investigate this and show whether hens can be poisoned or not by feeding them on blancmange to which boric acid has been added before he alarmed the world by making public so startling an assertion. For this purpose it was only necessary to clear up the whole question by so simple an experiment as the following.

I placed nine fowls for several days on ordinary corn-feeding, and observing that one showed some signs of respiratory trouble it was discarded and the following investigation was carried out on the remaining eight. On the first day one litre of milk and six grammes and five decigrammes of boric acid and 200 grammes of maize-flour were made into a thick porridge, which was equivalent to one ounce and 16½ grains in one gallon. This corresponded to a blancmange, and on it the hens were fed. On the second day they received the same feeding, and on the third day half of the same feeding. In three days the hens had each received about two grammes, or 30·86 grains, without any disturbance in health being noticeable. Their eagerness to eat corn was in no way diminished. On the twelfth day seven of the hens at 1 P.M. received 10 pills, each containing 0·05 gramme of boric acid—i.e., each received 0·5 gramme, or 7·72 grains. At 3 P.M. the same dose was repeated, so that every animal had received one gramme, or 15·43 grains. The eighth hen received 50 grammes of sweet almonds. On the thirteenth day no appearance of illness had manifested itself, and on the sixteenth day the fowls appeared perfectly well.

From this it is fully proved: (1) that if blancmange be prepared with milk and boric acid added even in such excessively large quantity as 6·5 grammes in a litre (or one ounce and 18½ grains in a gallon) it is not poisonous, and further that boric acid itself in such large doses as one to two grammes (or 15·43 to 30·86 grains) exercises no toxic effect on hens; (2) that the toxic appearances observed by Dr. Robinson in the hens did not arise from boric acid; and (3) that Dr. Robinson has not succeeded in ascertaining the true cause of the sickness which affected the hens and the inmates of the house. It is not necessary to state that my experiment on the hens has no other value than to prove Dr. Robinson's error.

Another point in Dr. Annett's article concerning the feeding of kittens requires to be gone into. Such experiments are extremely serviceable to the inquiry, but in the present instance the experiments performed do not fulfil their intended purpose, viz., to prove the toxic effect of *small* doses of boric acid when given for a long time. All that these experiments prove is already known, viz., that animals finally succumb under the repetition of large doses. I regret the necessity for adversely criticising these experiments, nevertheless, it is not stated how much the kittens ate, and the experiments show that conclusions based on only two series of experiments are founded on insufficient data, since two of the kittens fed on milk containing 40 grains died earlier than any of those fed on milk which contained 80 grains. It is necessary in order to form a reliable judgment concerning the feeding of kittens to have a long series of experiments. As I have stated, the difficulty is here present that the data given are imperfect. They permit, however, of a conclusion being drawn. One comes to the following results. If we take a solution of 40 grains in the gallon, corresponding to the second series of experiments, then there are 2·592 grammes in 4·545 litres (i.e., in one gallon) or 0·57 gramme in one litre. However, in the data given by the experimenter it is not stated how much of the milk the kittens

[1] THE LANCET, Jan. 2nd, 1897, p. 59.
[2] Ibid.
[3] Public Health, August, 1899.

consumed. It may have been a small quantity, say 100 cubic centimetres, which each kitten drank. In this case the animal ingested 0·057 gramme or 0·88 of a grain of boric acid. The mean weight of the kittens in the series was 408·4 grammes.

It must now be settled to what age in a child these three-weeks-old to four-weeks-old kittens are comparable. If we accept that a man grows till he is 20 years of age and that a cat grows till it is two years old, then the kittens experimented on may be compared to children of from nine to 10 months old. A child of this age has a weight of, it may be, eight kilogrammes and 300 grammes, and corresponding to the weight of the kittens such a child would require to receive 1·13 grammes or 17·44 grains of boric acid. To obtain this it would be necessary for a child to use one litre and 983 cubic centimetres of the milk consumed by the kittens (0·57 gramme of boric acid in one litre). But such a child at the very utmost could only partake of one and a half litres per day, which would contain 0·86 gramme, or 13·25 grains, of boric acid. To make a general comparison with the experiments on the kittens, since the child has a weight of eight kilogrammes and 300 grammes and the kittens of 408·4 grammes, the kitten ought to have received no more than 0·042 gramme of boric acid, and this quantity must be contained in 100 cubic centimetres. This would correspond with milk containing only 0·42 gramme per litre or 29·45 grains per gallon, while as much as 40 grains per gallon was used in these kittens. This difference of more than 25 per cent. of the stated quantity of boric acid is very important, particularly when the treatment is continued over a long period. According to this calculation, made in a very favourable light from the experimenter's standpoint, it is evident that Dr. Annett is very far removed from having proved by his experiments that small quantities, if used for a long time, are poisonous for men and children.

## THREE CASES IN WHICH MOVEABLE KIDNEY PRODUCED ALL THE SYMPTOMS OF GALL-STONES.

BY T. J. MACLAGAN, M.D. EDIN., M.R.C.P. LOND.,
AND
FREDERICK TREVES, F.R.C.S. ENG.

CASE 1.—A woman, aged 35 years, a widow with no children, tall and of spare habit, consulted me [Dr. Maclagan] in 1892. She had never had any serious illness, but for the last three years had suffered from occasional attacks of pain in the epigastrium, from indigestion and general loss of strength. She was thin and not well nourished; her complexion was sallow; she was somewhat anæmic and had the expression of one who suffered a good deal. She said that she was never quite well, had always more or less discomfort in the abdomen, and every now and then had an attack of severe pain—so severe as to make her call out. These attacks lasted sometimes for an hour or two, sometimes for eight or 10 hours, and sometimes for a whole day. The pain was referred to the hepatic and epigastric regions. The attacks had of late become more frequent as well as more severe; she seldom went a week without one and was getting worn out by them. After the attacks she was generally slightly jaundiced for a few days. She had consulted various physicians, some of whom regarded the pain as neuralgic and others thought that she had gall-stones. She underwent a course of treatment at Schwalbach without deriving any benefit from it. She did the same at Carlsbad the following year. From this she said she derived some benefit; but the excellent physician who looked after her there told her that she had a large gall-stone in her gall-bladder and that she would be no better till it was removed. When I saw her first she had considerable discomfort but was not in pain. There was tenderness on pressure over the epigastrium and at the edge of the left lobe of the liver; the gall-bladder could not be felt. The right kidney was very moveable and could be distinctly felt under the edge of the liver. No other abnormality was found. A week later I saw her in one of her attacks of pain. She was suffering much, the pain being referred to the epigastrium and to the right of it. The pulse was quick and feeble and the temperature was 99·8°F. She was tender to the touch over the seat of pain and the gall-bladder could be felt full and distended. The least pressure over it caused considerable pain. She had a dose of morphia and the pain passed off, leaving her slightly jaundiced for a few days. It was some days before the abnormal tenderness on pressure disappeared. A fortnight later she had another attack in all respects similar, and within the following three months she had five or six more. During each attack the gall-bladder filled up and after each she was slightly jaundiced for two or three days. The kidney could always be detected under the border of the liver. The character of the attacks and the symptoms produced all pointed to the presence of a gall-stone in the gall-bladder small enough to get into the cystic duct but too large to pass through it. This was explained to the patient and an operation was recommended for the removal of the stone and fixing of the kidney. Mr. Knowsley Thornton saw her with me and concurred in this view. On May 5th, 1893, he performed the operation. He first, by an incision in front, got at the gall-bladder. Nothing was found amiss with it. The gall-bladder and gall-ducts were carefully examined but no gall-stone was found, but behind it was felt a lump which turned out to be the right kidney. The wound in front was closed by stitches. The kidney was then reached by incision in the lumbar region and secured to the side by three silk sutures. The wounds healed rapidly, the patient made a good recovery, and six weeks after the operation went to the country to recruit. She remained well and has had no recurrence of her old symptoms.

CASE 2.—The patient was a woman, aged 34 years, the mother of three children. She had a history of having suffered from gall-stones for five or six years. On Nov. 17th, 1892, I saw her with Dr. J. Smith of Windsor. For two days she had been suffering from severe pain in the epigastric and hepatic regions, pain which was kept down only by injections of morphia. She was quite jaundiced, the temperature was 101° F., and the tongue was dirty. The gall-bladder could be felt full and distended; it was very tender, but as she was a good deal under the influence of morphia there was not much difficulty in examining it. On the following day the pain abated and she was able to do without the morphia. A gall-stone was found by the nurse in the stool. She remained jaundiced for a week or 10 days. She consulted me again in 1894. She said that she had never really been well since I saw her in 1892. She was constantly having attacks of pain, seldom going more than a week without one. For the relief of these she took opium. She was sallow, thin, and had a look of ill-health. There was tenderness on pressure over the epigastrium and the region of the gall-bladder but no swelling or fulness. The right kidney was very moveable and could be felt under the edge of the liver. I dieted her, gave a mixture containing sulphate and bicarbonate of soda, and enjoined a quiet life. In 1895 she again consulted me for the same symptoms and received the same treatment. I did not see her again till the spring of 1897 when she came to London to be under my care. She told me that she was steadily getting worse, the attacks being more frequent and more severe, so much so that she seldom passed more than two or three days without having to take morphia for the relief of the pain. She was thin, badly nourished, and slightly jaundiced. There was tenderness on pressure over the epigastrium and over the region of the gall-bladder, but no distinct fulness. The right kidney could be felt as before under the liver and was very moveable. Though no gall-stone was found in the stools there seemed no doubt that every few days a stone was either passing or trying to pass. She was getting worn out by the pain and though in time the gall-bladder might empty itself this seemed too great a risk to run. I explained the circumstances to the patient and to her husband and recommended an operation for the removal of the stones. Mr. Treves saw her with me and quite concurred both in my view of the case and in the advisability of operating. The patient was suffering so much and her life was such a burden to her that she readily assented. On May 26th, 1897, the operation was performed. Mr. Treves had better tell this part of the story:—"Immediately the abdomen was opened the gall-bladder presented. It was very much enlarged and was fully distended. It was readily emptied by pressure and was found to be free

from gall-stones as were also the biliary ducts. There were no adhesions. On examining the neck of the gall-bladder the kidney was encountered. Its upper end was actually lying on the cystic duct and the gland had to be displaced before the ducts could be examined. There was no evidence that the disturbance of the peritoneum attending the moveable kidney had led to such a mobility of the duodenum as could produce a kinking of the duct. The condition discovered definitely suggested that the kidney pressed directly upon the biliary passages. The gall-bladder was not opened and the abdominal wound was closed. An incision was then made in the loin and the kidney—which was very moveable—was secured by three silk sutures. The fact remains that the patient was cured of attacks of hepatic colic attended by jaundice by the fixing of her right kidney." The patient made an excellent recovery and went to the country six weeks after the operation. She has had no return of pain and now, two and a half years after the operation, remains well. She has gained in flesh and looks the picture of health. I accidentally met her two years after the operation and did not recognise her at first so much had her appearance changed for the better.

CASE 3.—A woman, aged 34 years, the mother of two children, of spare habit, had suffered for three or four years from indigestion, pain in the epigastrium, and symptoms of biliary catarrh. At times she had attacks of pain in the epigastrium and the region of the liver. During these attacks the gall-bladder could generally be felt more or less distended, and after each she was slightly jaundiced. The right kidney was moveable and could be felt under the liver. She improved at times under treatment, but never got well. During the winter 1897-98 matters got worse. Attacks of pain were more frequent as well as more severe. She lost flesh and was persistently slightly jaundiced. In the interval between the attacks there was more or less tenderness on pressure over the epigastrium; during them this tenderness was more marked, and, in addition, the gall-bladder could be felt full and distended, and was very tender. There was usually a slight rise of temperature. The diagnosis formed was that the gall-bladder contained a gall-stone which was small enough to enter the cystic duct but too large to pass through it. I had the advantage of having the opinion of Sir William Broadbent and of Mr. Treves, who both took the same view. It was decided to go on treating her medically in the hope that the stone would yet pass. She seemed to improve a little. In July, 1898, she went to Harrogate for a course of waters which seemed to do her much good. From there she went to America, where she spent the winter of 1898-99. There she got much worse, was constantly laid up with attacks of pain the same as before, only more severe. There the physician who attended her, Dr. Kinnicut of New York, treated her for gall-stones. She returned to London in April, thin, slightly jaundiced, and much worn by suffering. She was scarcely ever free from pain and every few days had a severe attack calling for the use of morphia. The gall-bladder could now always be felt; during an attack it was very tender and could be felt, to use Mr. Treves's simile, "like a small banana" in the abdomen. The right kidney was still displaced and very moveable. After watching her for a few weeks I felt that I was not justified in temporising any longer. The gall-bladder was so permanently distended and so tender that the patient ran the risk of acute inflammation and suppuration there. Again Sir William Broadbent and Mr. Treves saw her with me. They quite agreed that there was distinct risk in allowing matters to go on and that the gall-bladder should be opened and the stone removed. The patient and friends readily consented and the operation was performed by Mr. Treves on June 30th, 1899. Again, as in the last case, no stone was found. What was found Mr. Treves shall describe. "An incision was made in the upper part of the right semilunar line. The gall-bladder presented and was not less than four times its normal size. It was opened by an incision made in the fundus. A considerable part of the body of the gall-bladder was adherent to the great omentum. The bladder was emptied and I introduced my forefinger. On reaching the neck of the gall-bladder I encountered a tumour which pressed upon that part and which was very readily felt through the anterior wall of the viscus. An examination with the disengaged hand showed that the 'tumour' was the upper end of the right kidney. There is no doubt whatever but that the kidney was directly pressing upon the cystic duct. No gall stones were found. The opening in the gall-bladder was closed by a double line of sutures and the abdominal wound was also closed. A second incision was made in the loin, and the right kidney, which was very moveable, was secured by three silk sutures. In this, as in the previous case, attacks of hepatic colic, attended by some jaundice, were cured by suturing the right kidney." The patient went on well without any drawback for 12 days, when she was suddenly seized with great oppression of breathing, urgent cough, and bloody expectoration due to pulmonary embolism. She gradually recovered from this. The cough which persisted for some time was most unfortunate for the abdominal wounds, but notwithstanding it all went well and she left London for the country on August 8th, rather less than six weeks after the operation. Now, four months after it, she has a look of health, has a good colour, has gained considerably in flesh, and has had no return of her old pain. The only thing complained of is some pain and discomfort in the right side and extending down towards the groin. This no doubt is due to the stitches in the kidney and the drag on them.

The point of these three cases—the point which is specially desired to bring before the profession—is that all the symptoms of gall-stones—attacks of hepatic colic followed by jaundice—may be produced by pressure on the bile ducts by a displaced right kidney. In each of these three cases the symptoms were exactly those produced by gall-stones; and that the symptoms were due to that cause was the diagnosis formed by all the physicians and surgeons who saw them. In not one of them was a gall-stone found. In each the symptoms were due to the same cause, the pressure on the bile ducts of a displaced kidney, a pressure which was, from the nature of the disturbing cause, not continuous but occasional and intermitting—so mimicking exactly what occurs in gall-stones. In Cases 1 and 3 the pressure was on the cystic duct and the jaundice therefore was less marked and the pain probably less severe; in Case 2 the pressure was on the common duct and the jaundice more marked in consequence. It is to be noted, too, that this patient was said once to have passed a gall-stone which was found in the stool.

*Literature.*—Murchison thus enumerates the causes which may produce jaundice by pressure on the bile duct from without: (1) tumours projecting from the liver itself; (2) enlarged glands in the fissure of the liver; (3) tumour of the stomach; (4) tumour of the pancreas; (5) tumour of the kidney; (6) post-peritoneal or omental tumour; (7) an abdominal aneurysm; (8) accumulation of fæces in the bowels; (9) a pregnant uterus; and (10) ovarian and uterine tumours (Diseases of the Liver, p. 336). There is no mention of moveable kidney. But this must be added to Murchison's list. The recognition of this agency as an occasional factor in causing jaundice is recent, and by no means generally accepted. But that it has to be accepted and dealt with as a clinical fact is demonstrated by the cases now recorded.

There is little literature on the subject, first because it is only of recent years that displacement of the kidney has had its clinical importance recognised, and secondly, because it is the still more recent advance in abdominal surgery that has demonstrated how serious a cause of disturbance such displacement may be. Dr. Hale White has recorded a case of jaundice caused by the pressure of a moveable right kidney on the bile ducts in which the jaundiced condition was cured by fixing the displaced kidney.[1] Dr. Cordier of Kansas has recorded a case of moveable kidney in which the gall-bladder was found to be distended and in which the patient was at times slightly jaundiced. "The enlargement of the gall-bladder could be made to disappear in a measure showing that there was not a permanent or complete obstruction of its duct. That no further mistakes be made in her case I made a small anterior opening over the gall-bladder and explored it and its duct for stones, but none were found. This incision was closed and the usual lumbar incision was made, and the moveable kidney was anchored with three silk sutures to the fascia and muscles. Since the operation all her gall bladder symptoms have disappeared, and her appetite, digestion, and assimilation have greatly improved, and she writes me that she feels better than she has done for years."[2]

The peculiarity of the three cases now recorded is that all the symptoms of gall-stones—recurrent attacks of hepatic

[1] Brit. Med. Jour., vol. i., 1892., p. 223.
[2] American Journal of Obstetrics, 1896, vol. xxxiv., p. 532.

colic followed by jaundice—were produced by the displaced kidney. But for the operation undertaken for the relief of these symptoms the true cause of the disturbance would not have been recognised. Before the days of modern abdominal surgery these patients would have gone on indefinitely, leading lives of suffering and misery, with the constant risk of more serious trouble arising. The demonstration of the true cause of the disturbance is due to modern surgical advance. The point to be accentuated is that hepatic colic and jaundice may be produced by the pressure on the bile-ducts of a displaced kidney.

## A CASE OF HÆMORRHAGIC ASCITES.

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THE case of hæmorrhagic ascites published by Dr. G. S. Middleton in THE LANCET of Nov. 11th, 1899, p. 1286, recalled to my mind the following case, a brief note of which may be interesting.

A woman, aged 38 years, a domestic servant, was admitted into the Bristol Royal Infirmary on Jan. 20th, 1898, under the care of Dr. A. B. Prowse, to whom I am indebted for kind permission to publish the case. Four weeks before admission after being out-of-doors one evening she had felt cold and could not keep warm even in bed. She had been more or less "chilly" from that time. Two or three days after the onset of the cold sensation some swelling of the abdomen was noticed. Pain in this region quickly supervened and there was occasional vomiting. The bowels were constipated. The motions at first were of black colour but later became yellow. The urine from the onset was high-coloured and turbid. On admission to the Bristol Royal Infirmary the patient's abdomen was very distended and measured 37 inches in circumference. General tenderness was present and the greater part of the abdomen was resonant, but shifting dulness was present in the flanks. There was nothing noteworthy in the physical signs of the heart and lungs. The urine was high-coloured and there was abundant deposit of mucus and urates. Neither albumin nor sugar was present. The temperature was subnormal (97° F.). The abdominal pain continued. On the 22nd the bowels were moved four times and the motions contained much blood and mucus. The patient died suddenly on the 24th during a severe attack of abdominal pain.

At the necropsy the patient was found to be a stout woman with very distended abdomen and some œdema of the legs. The peritoneal cavity contained about 12 pints of deeply blood-stained fluid. The small intestine from the duodenum downwards was intensely congested and of a deep purplish colour. The congestion of the ascending colon was less marked and the transverse colon, descending colon, sigmoid flexure, and rectum were quite unaffected. There were numerous petechiæ dotted over the peritoneal coat of the congested intestines and in places thin flakes of exudation were present. The veins of the mesentery were greatly distended and full of blood-clot, none of which, however, appeared to be ante-mortem. The veins running over the surface of the stomach were similarly distended and full of blood-clot. The portal vein also was about double its normal size and was full of blood-clot of blackish-purple colour, like that present in the other veins. The divisions of the portal vein throughout the liver were also greatly distended. The hepatic veins were abnormally full but contained no ante-mortem thrombi. There was nothing abnormal in the inferior vena cava. The mucous membrane of the stomach was free from congestion. The duodenum was injected, but the colour of its mucous membrane was pale compared with that of the jejunum and ileum. The congestion of these divisions of the small intestine was intense and a large quantity of blood was mixed with the fæces in their interior. The mucous membrane of the ascending colon was also congested but to a much slighter extent. The wide area of congestion in the small intestine was free from the sticky mucus seen covering patches of congestion present in acute enteritis. The mesenteric veins and arteries were opened but no ante-mortem thrombosis was present. Beyond the distension of the veins above mentioned the liver showed nothing noteworthy. It weighed 48 ounces. The spleen was enlarged, weighed 16 ounces, but was not softer than normal. There was nothing abnormal in the suprarenal bodies, pancreas, or kidneys. Both pleural cavities contained ten ounces of clear fluid. The trachea, bronchi, and lungs showed nothing noteworthy, but there was a very large congested lymphatic gland, of the size of a small hen's egg, situated below the bifurcation of the trachea. The heart and pericardium were free from disease. Cultures were taken by Dr. J. O. Symes from the spleen and from the enlarged lymphatic gland, but only the bacillus coli communis was found.

The congestion of the intestines followed closely the distribution of the superior mesenteric vein and I expected to find thrombosis of that vein. I was, however, disappointed; the superior mesenteric vein contained merely soft, dark post-mortem clot and the portal vein showed distension fully equalling in degree that of the superior mesenteric vein. Yet to the naked eye the divisions of the portal vein in the liver were free from ante-mortem thrombus, as were also the hepatic veins, which I have seen thrombosed alone, leading to great congestion of the liver. Neither bacilli nor other micro-organisms were seen in microscopic sections of the liver stained by Gram's method and with methylene blue and fuchsin, but the small divisions of the portal vein showed organising thrombi in their interior. Only one small piece of the liver was taken for histological purposes and the discovery of thrombi in one small area does not prove that they were present throughout the substance of the liver. But while such absolute proof is wanting it must be allowed that extensive thrombosis of the small divisions of the portal vein would in great measure explain the congestion of the small intestine and the ascites. Such thrombi, however, whether limited in extent or widespread, must have been merely one of the morbid evidences of more abstruse pathological factors. The failure to discover some definite micro-organism does not prove that it was not present. The history given by the patient of a "chilly" feeling at the onset suggests a rise of temperature, and a rise of temperature further suggests some acute or subacute infection, and it is reasonable to suppose that such infection, if present, took place by the alimentary canal through some article of food.

Clifton, Bristol.

## A CASE OF MULTILOCULAR CYSTIC EPITHELIAL TUMOUR OF THE JAW; EXCISION OF HALF THE LOWER JAW; RECOVERY.

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CASES of multilocular cystic epithelial disease of the jaw in which the tumour has attained a large size before removal are not very common. This case, therefore, may prove of interest to the profession.

A woman, aged 66 years, a widow, consulted me in August, 1897, regarding a tumour of the lower jaw of a cystic nature which she said had been growing for 20 years. A few days later, the patient being placed under chloroform, I laid open the cysts and gouged the parts freely, hoping that an operation of this kind might give her relief for some time. About January, 1899, however, there was a decided increase in the size of the tumour, and on May 15th she came into the Liverpool Royal Southern Hospital for removal of the growth (Fig. 1). On the 16th I removed the left half of the lower jaw with the tumour involving it. It was necessary to split the lip through, but I had very little difficulty in disarticulating the bone and the coronoid process came out with the growth intact, none of the cysts being opened. Hæmorrhage was profuse, but there was no difficulty in checking it. The wound was closed, a drain being left at the posterior angle. The patient made an excellent recovery and was able to be up and about the ward at the end of 10 days and the wound healed soundly in three weeks (Fig. 2).

An examination of the parts removed showed that the tumour consisted of the left half of the lower jaw distended by cysts, which varied in size from a pin's head

up to a large orange. One large cyst projecting outwards formed the bulk of the tumour. Its walls were made up partly of bony plates and partly of fibrous

FIG. 1.

Before operation.

tissue, the interior being lined by a smooth, shiny membrane somewhat resembling the mucous membrane of the mouth. This large cyst communicated with other cysts, and across its

FIG. 2.

After operation.

cavity stretched fibrous bands, evidently the remains of a partition between it and some other cyst. The contents of the larger cysts resembled chocolate in colour and consistency, but in the smaller ones the fluid was clear and mucoid. The coronoid process of the jaw was hollowed out right up to its tip and the condyle was involved as far as the neck, so that it stood out like a button from the growth. The cut surface near the symphysis clearly showed that the growth originated in the central or cancellous portion of the jaw, distending the outer compact wall, and here was also some solid material which had not yet become cystic. The three teeth in the part removed were in the roof of a large cyst. On making sections of a small cyst which had thrown out a process I found that the cyst consisted of a wall of fibrous lamellæ lined on the inside by columnar epithelium. In the process of the cyst was more solid matter, and here I found masses of epithelial cells breaking down in the centre and forming cysts. In cysts of the size of a hazel-nut I found traces of epithelial lining, but in the largest cysts this had disappeared altogether. On the outside of the jaw near the teeth there was a solid portion of tissue which was made up of epithelium becoming cystic. An examination of the gum over the tumour showed that it was fairly normal, but at one point the epithelium showed signs of growing in. The tumour was therefore a multilocular cystic epithelial tumour.

After the gouging operation which I did on this case in 1897 I could find no traces of epithelium in the parts removed, but I had not at that time any of the solid portion of the tumour from the margin of the growth and I therefore drew erroneous conclusions concerning its nature. It was not until the growth had broken through the bony wall of the jaw that the increase in size took place. The tumour then became painful from pressure on surrounding parts setting up severe neuralgia; there was also some pressure on the pharynx and difficulty in taking food. As the tumour had lasted 20 years some idea of the slowness of its growth may be gained. I could get no history of tooth irritation at the commencement of the disease. The microscopical sections show every stage from the mass of epithelial cells to the fully developed cyst.

Liverpool.

## AN UNUSUAL CASE OF EMBOLISM IN THE FUNDUS OCULI.

BY H. WRIGHT THOMSON, M.B., C.M. GLASG.,
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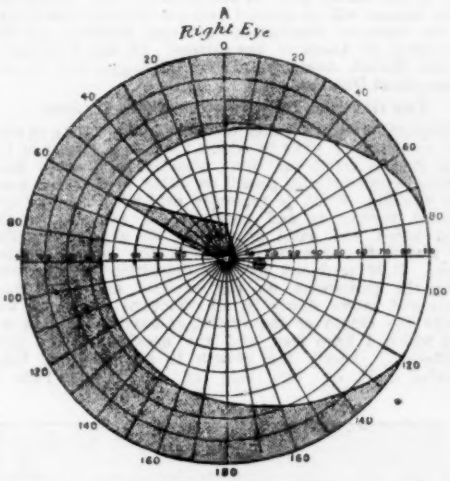
EMBOLISM of the central artery of the retina is a lesion which, though not very common, is well known and very definite in its symptomatology and sequelæ. Embolism of a branch of the retinal circulation is, however, a very uncommon affection, as borne out by reference to text-books on ophthalmology. Thus Berry mentions having seen one case of embolism of a branch of the central retinal artery, and although he does not state which branch it was the progress of the case would indicate that it was not the macular artery which was affected, and Schobl[1] refers to several cases of macular embolism reported by Perls as occurring in the clinic of Hirschberg.

A young woman, aged 19 years, first consulted me at the eye dispensary of the Glasgow Royal Infirmary on May 11th, 1899, but in view of the advantages likely to attend indoor treatment I referred her to the ophthalmic department of the infirmary, where she was admitted under the care of Dr. A. Maitland Ramsay, to whom my thanks are due for permission to follow out and publish the case. The history was that three days previously the patient had been sitting at the window of a room and after rising and going to a dim corner she noticed on looking towards the fire that the sight of the right eye had become very much obscured. Her movements had not been sudden nor had she exerted herself in any way apart from rising and walking. There was no pain and the dimness of vision reached its maximum intensity instantaneously. She stated that for three years she had been troubled with attacks of transitory blindness of the right eye, occurring sometimes as often as two or three times a month. They were but momentary in duration and recovery was always sudden and complete. They bore no obvious relationship to menstruation. As a

[1] Norris and Oliver's System of Ophthalmology.

worker at a tobacco factory her eyes were not subjected to any great strain and they were noted to be almost emmetropic. At the age of nine years she had suffered from chorea, and on examination of the chest there was found a rough ventricular systolic aortic murmur well propagated into the carotids which were visibly pulsatile. The urine cast an abundant sediment of urates. There was a trace of albumin present and microscopically a few epithelial casts were seen. Vision, as tested in the ordinary way, seemed reduced to perception of light, but on holding up a finger at a distance of one foot and directing the patient to look at the point she stated that she could not see the top part of it at all, but that the lower half was plainly visible. Examination with the perimeter revealed an area of absolute blindness, as shown in the chart. Owing to the limited area of the

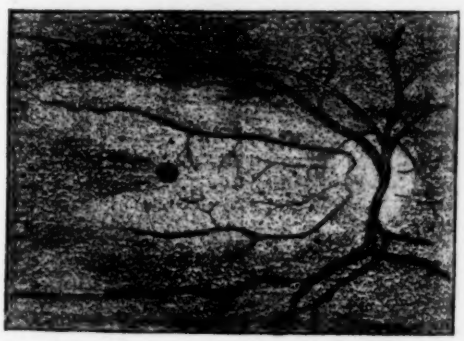
FIG. 1.




The shaded area extending out from the centre of the chart represents the area of blindness in the field of vision.

scotoma light perception in it was difficult to test accurately, but it certainly was much diminished, if not absolutely abolished. On ophthalmoscopic examination the optic disc was found to be œdematous, with its margin, except at the upper part, very indistinct. On the outer side the disc seemed to merge into a pale, almost white, slightly œdematous area, of shape and extent as shown in Fig. 2.

FIG. 2.



Appearance of fundus when first seen. The area of lighter shading shows the extent of the ischæmia.

There was a circular, cherry-red spot in the macula. Its diameter was about one-fifth that of the disc and its deep red colour contrasted strongly with that of the normal fundus which extended right up to its temporal border. The macular artery emerging from the optic disc at a spot near its lower and outer margin was seen to divide at once into two branches, which, in comparison with those of the other eye, were small in size and embedded, especially the upper, in œdematous exudation. The retinal veins as a whole were distinctly engorged, while the arteries seemed to be of normal calibre. The patient was put to bed, an alkaline diuretic mixture was ordered, and three times a day she had $\frac{1}{100}$th of a grain of nitro-glycerine in capsule form. On May 11th she reported a slight improvement in her sight. The œdema of the disc had passed off and its outline was clear, but the retinal œdema was more marked than formerly. The retinal veins had increased in fulness. By the 16th—that is, eight days from the onset of blindness—the disc and retina were free of œdema and the area of former pallor hardly differed in colour from the surrounding fundus. The cherry-red spot could be seen, but only faintly. The macular arteries seemed to be of good size, with blood flowing through them. On the 25th, the seventeenth day of the illness, vision equal to $\frac{6}{60}$ was obtained by tilting the eye upwards. The macula was still a little red, but the fundus was otherwise uniform in colour. The disc was sharply and clearly defined and its temporal half was pale in colour. The nitro-glycerine was stopped. On the 30th the pallor of the disc was more marked, the macular arteries were still of good size, and the macular region was normal in appearance. On August 5th there was distinct atrophy of the temporal side of the disc. The patient reported several attacks of momentary blindness of the right eye. On Nov. 3rd, 1899, the following note was made: "Vision equal to $\frac{6}{60}$, but clearer than formerly. Fixation of any point is accomplished by turning the eye upwards through about four or five degrees. In this way J. 20 is read. She is quite able, however, to direct her eye straight on an object, but she only sees the peripheral parts of it. The pupils are equal and equally active. She experiences no inconvenience and is unconscious of her defect unless she covers the left eye. During the last five weeks she has had four attacks of transitory blindness and on one occasion the left eye was slightly affected. The general fundus appearance is normal and the only indication of former trouble seen is the atrophied condition of the temporal side of the optic papilla, sharply separated by a vertical line from the rose-coloured nasal half. The scotoma in the field of vision has remained of constant size."

There can be no doubt that there occurred here a sudden and complete cessation of part of the retinal arterial circulation, and the typical appearance of the macula and the definite relationship borne by the ischæmic area to the course of the two branches of the macular artery clearly indicate it to have been the vessel affected. It is when we turn to the subjective symptoms that we meet with difficulty, for whereas the ophthalmoscopic appearance would lead us to expect in the field of vision an area of blindness having the shape of a Y lying horizontally with its base at the normal blind spot, there is found only an area corresponding to the macula and the part of the retina supplied by the terminal part of the inferior macular artery. In this connexion two cases reported by Clark of Columbus[2] are of much interest. In them it was the central retinal artery which suffered embolism, while the macular arteries—which were of deep origin, as in the present case—escaped. In each case, however, the area of remaining vision was triangular in shape with the apex at the point of fixation and the base to the temporal side—that is, roughly speaking, corresponding to the area of retina between the macula and the optic nerve entrance.

In seeking for an explanation of these apparent anomalies we must turn to the anatomy of the retinal circulation. With regard to the normal distribution of the arteries supplying the macular area one finds very varying statements, but the following shows the result of the examination of 100 eyes chosen indiscriminately. (The term "macular" artery is here used in reference to vessels which demonstrably reach the macular region and does not apply to the minute vessels which so commonly appear close to the margin of the optic disc and, passing horizontally outwards, seldom reach further than half way to the macula.) Macular arteries branch from the temporal arteries in 79 eyes; one macular artery branches from the central retinal artery in three eyes; one or both macular arteries appear near the margin of the disc in 15 eyes; and the common macular artery appears near the margin of the disc in three eyes. It is thus seen that most

[2] Ophthalmic Review, vol. xvii.

commonly (79 per cent.) the macular arteries are offsets from the temporal branches of the central artery of the retina, but that in some cases (18 per cent.) they enter the fundus independently by an opening or openings in the optic disc near its temporal margin. Such marginal arteries are commonly called "cilio-retinal," and the recent anatomical researches of Elschnig,[3] who states their frequency at 7 per cent., go to prove that they always arise, directly or indirectly, from the circle of short ciliary arteries which surrounds the optic nerve.

When there is considered the great functional importance of the papillo-macular region and the infrequency of occurrence of cilio-retinal arteries it would seem not at all unlikely that in such cases there is present a supplemental arterial supply of retinal origin, ill developed, but capable of some extension when the necessity arises. If this be so, then in the present case the small branches of the central retinal artery have been sufficient to maintain the nutrition of all the area of retina affected, except the macula itself and a small strip extending downwards and outwards, till the re-establishment of the circulation in the vessel which had been temporarily occluded. The well-marked atrophy of the temporal side of the optic nerve shows that part to have been entirely dependent for nutrition on the cilio-retinal artery.

There will be noticed in the previous and subsequent history of the present case the frequent occurrence of attacks of transitory blindness of the right eye. Mauthner,[4] who had the opportunity of examining a patient while suffering from such an attack, found retinal ischæmia, and he explains the occurrence as being due to the temporary detention of a large embolus at the mouth of the central retinal artery, too large to enter, and soon carried on to enter a larger branch of the ophthalmic artery. Such an explanation seems readily applicable to this case, and all the more so that during the period of circulatory calm incident to hospital residence and treatment no such attacks manifested themselves. Further, it seems quite reasonable to suggest that the occlusion of the common macular artery was caused by the engagement at its origin in a ciliary artery of a large embolus which by the end of eight days was carried on to cause, it may be, embolism of a vessel freely supplied with anastomosis, and therefore giving rise to no gross symptoms.

To recapitulate, there occurred embolism of the common macular or cilio-retinal artery, the embolus being caught at its point of origin. Thus occlusion lasted eight days, during which time the nutrition of part of the retina involved was maintained by small branches of the central retinal artery and by the end of which time the embolus was carried further into the ciliary circulation.

Glasgow.

## REPORT ON "HENPUYE" IN THE GOLD COAST COLONY.[1]

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HENPUYE, or dog nose, is a disease frequently met with in the Gold Coast Colony and in certain portions of its Hinterland. The hideous deformity of the face which it causes is very striking to anyone who has lived in this part of West Africa. It is also known on the French Ivory Coast under the name of "goundu" or "anakhre," but "henpuye" is the native name (Appolonian) for the disease on the Gold Coast. The peculiar nature of the disease and the fact that, as far as I could find, very little was known as to its nature led me to make the inquiries which are now embodied in this report. I regret very much that I am unable to refer to original papers on the subject or to be certain that I have the full literature, but my excuse is that libraries do not exist in West Africa. The only references which I have met with are those mentioned in Dr. Patrick Manson's work on "Tropical Diseases" (page 594), and they are those of (1) Professor Alexander Macalister (Royal Irish Academy, 1882), (2) Surgeon J. J. Lamprey A.M.S., (*Brit. Med. Jour.*, vol. ii., 1887), (3) Dr. Henry Strachan (*Brit. Med. Jour.*, vol. i., 1894), and (4) Dr. Maclaud (Archives de Médecine Navale, 1895). It is by the kind permission of the Governor of this colony, Sir Frederick Hodgson, K.C.M.G., that I am allowed to publish this report. I am much indebted to Captain Armitage for his kindness in giving me information with regard to the different places in which he has noticed this disease in his travels, for drawing my attention to notes of the late Mr. Ferguson on the presence of the disease in Akim and Kwahu, and for making a painting of an advanced case of the disease; also to Dr. Henderson, the chief medical officer of the colony for many kind suggestion; and, lastly, to Mr. Crowther, draughtsman in the Public Works Department, for supplying me with a map of the colony and its Hinterland. The description of the disease will be divided into the following headings: (1) the General Description of the Disease; (2) the Description of Cases of the Disease; (3) the Treatment; (4) the Morbid Anatomy; (5) the Etiology; and (6) the Geographical Distribution.

### THE GENERAL DESCRIPTION OF THE DISEASE.

Henpuye starts in a native of West Africa during or soon after an attack of yaws in which there is a history of the nasal mucous membrane being attacked as a small bony swelling symmetrically placed on either side of the nose. This swelling, which is generally oval with the long axis directed downwards and outwards, is attached to the nasal bones, the nasal process of the superior maxilla, and also to the superior maxilla in the more advanced cases. It is produced by the deposition of new bone under the periosteum on the external aspect of these bones and grows slowly in all directions. It in no way affects the mouth or the orbital or nasal cavities in any case which I have seen and the nasal ducts are quite unaffected. Rarely the growth is asymmetrical, being situated only on one side of the nose. Pain in

FIG. 1.

Full-face illustration of a typical advanced case.

the nose with the presence of a sore in that organ are the symptoms complained of at the commencement of the disease; later headache is sometimes felt and pain in the swelling during wet weather. As the growth becomes larger it seriously interferes with the sight by growing up in front of the eyes and even hiding them, but I have never seen it cause destruction of the eyeball (see Fig. 1). In

[3] Loc. cit.
[4] Archiv für Augenheilkunde, Band xv., S. 28.
[1] Published by the permission of his Excellency Sir Frederick Hodgson, Governor of the Gold Coast Colony.

many cases the patient has to bend his head downwards in order to be able to see over the tops of the swellings. The skin over the tumour is normal and is freely moveable. The course of the disease is that the swellings may cease to grow at any period of their existence or may continue to grow for years—that is to say, they may remain quite small or may grow to be large lumps, in the latter case giving rise to the deformity and the interference with the sight, but I am unacquainted with any case in which they break down or ulcerate. Finally, the disease is much more common, in my experience, in men than in women.

### DESCRIPTION OF CASES.

The following cases will be described: (1) slightly developed cases; (2) moderately developed cases; (3) an advanced case; and (4) an asymmetrical case.

*Slightly developed cases.*—CASE 1.—The patient, a boy of about 17 years of age, said that about seven years ago he noticed two small lumps on the nose which began after yaws in which there was a sore in the nose. They increased slightly in size, but soon ceased to grow and have been in their present condition for some years. He never felt any discomfort or pain in them. The two lumps had their long axes directed downwards and outwards, the measurements being half an inch by a quarter of an inch. They were attached to the nasal bones just above the cartilages and the nasal process of the superior maxilla and were firm, smooth, bony tumours. The skin over them was quite normal and they did not in any way project into the nasal cavity or affect the line of vision, being too small for the latter purpose. There was very little deformity and no treatment was necessary. In this case the lumps soon ceased to grow and caused little or no deformity.

CASE 2.—A small Grunshi girl from Kumassi, about seven years of age, who had had yaws some time previously, felt pain in the nose a few months ago and noticed a small swelling on each side of the nose, and this gradually increased in size till it reached its present condition. Her mother was most anxious to have it removed on account of the deformity (see Fig. 2).

FIG. 2.

Representation of a slightly developed case (Case 2).

On inspection there was found to be an oval swelling on each side of the nose attached to the nasal bones and the nasal process of the superior maxilla. The long axis of the swelling was directed downwards and outwards—an inch in length and half an inch in breadth. The nasal cartilages were not affected and the interior of the nose was normal. The orbital cavity, the mouth, and the nasal ducts were quite unaffected. The skin over the swelling was normal and freely moveable. The patient felt no pain in the tumour and she had never had any headache. The growths were removed by operation. It was very difficult to obtain definite history as to the time when this patient had had yaws and as to the time when the growth appeared, but as far as I could make out the yaws were well developed when the swelling was first noticed.

*Moderately developed cases.*—CASE 3.—A young man, a Ga native, who had had yaws about seven years ago, felt pain in the nose and got a person to look into the nose, who said that there were yaw spots on the mucosa and later a small swelling on each side of that organ was noticed. These small swellings grew slowly to their present size and the patient said that they were still increasing. He complained of frontal headache and of slight pain in the swellings in wet weather. On inspection (Figs. 3 and 4)

FIG. 3.

Full-face illustration of the disease as described in Case 3.

two symmetrically placed swellings were seen on each side of the nose, looking somewhat like small eggs. They were oval in shape, with the long axis directed downwards and outwards. The left measured two inches by two inches and the right three inches by two and a half inches. A profile view showed that they were slightly concave on the side towards the orbit. They did not affect the orbital or nasal cavities, nor did they project into the mouth or affect the nasal ducts or the cartilages of the nose. They were attached to the nasal bones, the nasal process of the superior maxilla, and to the superior maxilla itself. They were smooth, but on the left side the tumour rose to a central ridge. The skin over the swellings was quite normal and was freely moveable. In order to see clearly the patient often had to bend his head somewhat. The growths were removed by operation.

CASE 4.—The patient was an Akwapim woman, aged about 20 years. This case was similar to Case 3, but the swellings, which had started when the patient (who had suffered from yaws) was seven years of age, were rather more rounded. She would not consent to operation.

*An advanced case.*—CASE 5.—A man, a native of Appolonia, about 40 years of age, stated that the swellings began with pain in the nose after yaws when he was about six years old. They grew steadily and slowly till eight

years ago when they stopped, and they have not increased in size since then. On inspection there were two oval swellings situated on each side of the nose, the left measuring two and a half inches by one inch and the right three-quarters of an inch by half an inch. They projected upwards over the orbit, the long axis in each case being directed downwards and outwards. They did not project into the mouth, the nose, or the orbit, and the nasal duct was free. They were attached to the nasal bones, the nasal process of the superior maxilla, and to the maxilla itself. The skin over the tumour was normal and

FIG. 4.

Representation in profile of the patient in CASE 5.

it was freely moveable. The patient complained of headache and found that the swellings interfered with his vision considerably, particularly on the left side. He refused to submit to operation.

*An asymmetrical case*.—CASE 6.—An Ashanti boy, aged six years, from Donkeo Inquanta, had yaws and while suffering therefrom just a year previous to his consulting me the swelling appeared on one side of the nose, and had been growing ever since. There was no sign of any lump on the other side. He was advised to go to Kumassi for operation.

### THE TREATMENT.

I have attempted to reduce these swellings by the administration of iodide of potassium but have not met with any success. The only treatment appears to be the removal by operation. The method I adopt is as follows. The eyes being protected by a pad over each an incision is made along the long axis of the tumour and the skin is freed on all sides so that its base is exposed. If the swelling is very small in a child it may be necessary to make a cross cut through the skin as well in order to get sufficient room to work in. The bone being exposed a portion of the swelling can easily be cut away by bone forceps because it is very soft. If large a few nicks with a Hey's saw are found most useful in enabling a large portion of the mass to be removed entire. After as much has been removed as is possible with the bone forceps more may be got away by means of the gouge or the gouge forceps or the nibbling forceps. I have experienced difficulty in removing the deeper portions, particularly those close to the orbit. I need hardly say that in the latter the eye has to be carefully guarded from injury. After removal of the bone the wound is well washed out with an antiseptic lotion. The bleeding is slight and is easily controlled by pressure. The wound is closed by a continuous suture and it heals up readily.

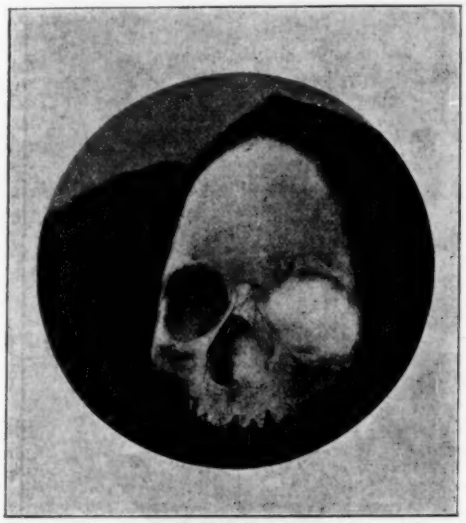
### THE MORBID ANATOMY.

I have never had any chance of examining the growth post mortem, but the portions which I have removed *en masse* by operation have enabled me to make some investigations. The periosteum strips off readily and under this is a thin shell of compact bone which appears somewhat ridged on the side towards the periosteum. The rest of the tumour consists of cancellous bone. The whole swelling cuts readily with bone forceps and consists of quite soft bone. On making microscopical preparations there were signs of ossification in membrane proceeding under the periosteum and the rest appeared like ordinary wide-meshed cancellous bone. The whole process appeared to be that of a slow "osteoplastic periostitis."

### ETIOLOGY.

Two views on the etiology of this disease have been brought forward up to the present time, as far as I know—viz., that the swellings were of a racial character and that the process was started by the larva of some insect. With regard to the first I have only to mention that the disease is found in Ashantis, Grunshis, Fantees, Ahantas, the Ga people, &c., &c., races quite different from one another, to show that this cannot be entertained. As to the second I have never met with evidence which would support the idea that the disease was started by a larva. On the other hand there is always the history of yaws and of the tumour starting during the attack of yaws—i.e., during the period of eruption or soon after. Then, again, the patients complain of pain in the nose with, in some cases, distinct history of a sore and sometimes discharge preceding the swelling. This might be due to some irritation or ulceration of the nasal mucous membrane by the yaws. I have never had the opportunity of examining any person at this stage of the disease, but in the more developed cases I have examined the nose for marks or signs of old ulceration but have not found them. If, however, the nasal process of the superior maxilla be examined (Fig. 5) a few foramina are

FIG. 5.



From a photograph of a Moshi skull, to show the suture of the nasal process of the superior maxilla, with a hair passed from the nose through one of the channels for vessels, a little of the bone being cut away to show the direction of the canal.

to be seen, and these are often joined together by a small groove indicating the position of a bygone suture. The foramina are for small blood-vessels which are said to communicate with those of the mucosa of the nose. The site of these foramina is the situation where henpuye starts and I venture to bring forward the theory that the causation of this peculiar disease is due to an osteoplastic periostitis brought about by the absorption of the poison of yaws from

the nasal mucous membrane through the small vessels (or lymphatics) keeping open the foramina which indicate the suture above mentioned.

THE GEOGRAPHICAL DISTRIBUTION.

I am only aware of cases reported from the Gold and Ivory Coasts of West Africa and the West Indies. I never met with it in Mamprusia, nor have I met any trader coming from Moshi with it, nor have I met with it in Fra Fra, and I can find no one who has seen it in the eastern parts of the colony. But in the following districts it has been noted: Ahanta, Appolonia, Fantee, Accra, Aquapim, Akim, Assin, Sefwhi, Ashanti, Attabubu, Kwahu, Kintampo, Berekum, Gaman, the Neutral Zone, and Wassaw. It is perhaps most common in the Sefwhi, Wassaw, and Appolonia districts which adjoin the French Ivory Coast, where cases are also known.

I look upon henpuye as a localised osteoplastic periostitis in the region of the nasal process of the superior maxilla, generally symmetrical, due to yaws and found among the natives of West Africa and the negroes of the West Indies.

Accra.

# THE DIFFERENTIAL DIAGNOSIS OF MONGOLISM AND CRETINISM IN INFANCY.

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UNDER the term "cretinoid" have been included various forms of imbecility in infants which until recent years were not clearly differentiated as to their pathology and characteristic features. In practice we find that children of the cretinoid type are either cretins or Mongolian imbeciles. Cretinism, or infantile myxœdema, is a rare affection in this country, but in the medical literature of the past few years, owing to the successful employment of the thyroid gland treatment, many cases have been reported. Mongolism is a form of congenital imbecility which is much more common but to which comparatively little attention has been directed. It is so named from certain facial appearances which at first sight suggest a Chinese origin. The term was introduced by Dr. Langdon-Down in his classification of idiots on an ethnological basis, and although his classification has not been generally accepted the name "Mongolian" has been adopted as happily descriptive. This form of imbecility is well known to those engaged in asylum practice, but it is during the early months of life that diagnosis is called for and treatment must be adopted if those fragile lives are to be prolonged.

Owing to the similarities between these two affections, "cretinism" and "Mongolism," which are at first sight very striking, confusion is apt to arise. In both the physical and mental development is delayed, the vital powers are low, the temperature is subnormal, and sensitiveness to cold is a marked feature. In both occur the following facial alterations—viz., depressed bridge of the nose, small palpebral fissure, and protruding tongue. In both the abdomen is large, an umbilical hernia is often present, and there is a marked tendency to constipation. In both the fontanelle is late in closing and the teeth are late in appearing, are poorly developed, and decay rapidly. In both speech is much delayed and is replaced by peculiar, grunting, animal-like noises, while snoring during sleep is very pronounced. In both there is great muscular debility without any definite paralysis. Hence it may happen that a case of Mongolism is regarded as one of cretinism; thyroid treatment is adopted, and this failing to produce any benefit becomes rather discredited in the eyes of the physician. If, instead of comparing, we contrast a typical case of Mongolism (Fig. 1) with one of cretinism (Fig. 2) we find that the differences are great and should render the distinction easy.

FIG. 1.

A case of Mongolian imbecility.

FIG. 2.

A case of cretinism.

In the following table I have enumerated some of these differences:—

| CRETINISM. | MONGOLISM. |
|---|---|
| 1. Characteristic features seldom present before the sixth month. | 1. Present at birth. |
| 2. Dull, impassive infants, taking no notice of anything or anyone; face expressionless, of a lower animal type, "toad like"; absence of active movements. | 2. Smiling, grimacing infants; shy, but observant, imitative; active movements present. |
| 3. The skin swollen, dry, scaly; fatty deposits in neck; hair coarse and scanty. | 3. These changes absent. |
| 4. No characteristic skull changes. | 4. The skull flattened antero-posteriorly, brachycephalic. |
| 5. The palpebral fissure *appears* small from swelling of eyelids; epicanthus not present. | 5. The palpebral fissure *is* small and obliquely placed, without swelling of lids; epicanthus marked. |
| 6. The tongue is very large, swollen, and protruding. | 6. The tongue is large, often protruded, but not swollen. |
| 7. The lips are thick, immobile, and everted. | 7. The lips are mobile, pursed up, and everted on movement or crying. |
| 8. Congenital heart disease rare. | 8. Common. |
| 9. Relative size of fingers normal. | 9. Little finger short and curved; thumb short. |
| 10. Thyroid gland absent or atrophied. | 10. Thyroid gland normal. |
| 11. Marked benefit received from thyroid gland treatment. | 11. No benefit. |

In well-marked cases these differences will usually allow of an exact diagnosis being made, but as in other affections one not infrequently meets with slightly marked cases in which the symptoms are not pronounced, and many of them may be absent. In such a case the special Mongolian characteristics on which stress should be laid are the active movements of the face and limbs as contrasted with the lethargic state and expressionless face of the cretin. The smiling face of the Mongolian imbecile suggests the possession of some secret source of joy, while the somewhat sad countenance of the cretin suggests the cherishing of a secret sorrow. A careful investigation as to anatomical defects and changes will usually reveal the presence of some of these which are sufficiently characteristic. The final test is the therapeutic one, as under the administration of thyroid gland the cretin will in time show changes of a most striking character while the Mongolian infant will remain unaffected.

Old Cavendish-street, W.

# Clinical Notes:

## MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

### BULLET WOUND IN THE HEAD; REMOVAL OF THE BULLET FROM THE NOSE TWENTY MONTHS AFTERWARDS.

BY CLAUD WOAKES, M.R.C.S. ENG., L.R.C.P. LOND., SURGEON TO THE LONDON THROAT HOSPITAL; AURAL ASSISTANT AT THE LONDON HOSPITAL.

A MAN, aged 24 years, late a private soldier, presented himself on June 14th, 1899, at the aural department of the London Hospital, complaining of a foul-smelling discharge from the left nostril. He gave the following history. On Oct. 20th, 1897, he was one of those engaged in the brilliant attack on, and capture of, the Dargai heights when he was shot from above, the bullet entering the skull just below the left frontal eminence. He became unconscious, but recovering quickly was able to retire and receive first aid. The superficial wound in the forehead was stitched up. At the same time he expectorated a small piece of lead. He was sent to the base hospital, where his left eye, through which the bullet had passed, was removed. On examining the left nostril I found it to be almost closed by a broad bridge of mucous membrane running from the outer wall to the septum. After cutting through this under cocaine an examination of the interior of the nostril with a probe revealed a hard partially moveable substance buried in granulation tissue. This examination causing some hæmorrhage an antiseptic and astringent lotion was prescribed and the patient was told to come again in the following week. On June 21st a clearer view was obtained, and by seizing the hard substance with a pair of strong nasal forceps passed up the nostril a large irregular piece of lead was removed without injuring the nostril, with a square inch of khaki attached which had been carried in with the bullet from the peak of the helmet, the whole being covered with foul-smelling crusts and discharge. The hæmorrhage caused by this

operation was easily stopped by syringing with hot antiseptic lotion, which the patient was ordered to continue to use for a week, during which time several pieces of bone came away. Besides the discharge before mentioned the symptoms had been severe headaches and slight attacks of ague, but when the patient was last seen, five months after the removal of the bullet, these symptoms had all disappeared. In the accompanying illustration the bullet is represented as slightly smaller than its actual size. It measures one inch in length, five-eighths of an inch in breadth, and three-eighths of an inch in width, and it weighs 343 grains. The patient has now a large depressed scar over the left frontal eminence and eyebrow. The left eye is entirely gone, the left antrum is minus its nasal wall, and the anterior two-thirds of the inferior turbinated bone are absent, and there is a small stellate cicatrix in the roof of the mouth slightly to the left of the middle line.

Harley-street, W.

### CASE OF IMPACTED EXTRACAPSULAR FRACTURE OF THE NECK OF THE FEMUR.

BY H. E. BELCHER, L.R.C.P. LOND., M.R.C.S. ENG.

A MAN, aged 26 years, was driving at about 10 A.M. on Dec. 7th, 1899, when the horse bolted and threw him into the road. He had been a heavy spirit-drinker for months, and when I saw him, immediately after the accident, he appeared to be suffering from the effects of drink and of a blow which he had sustained on his head. His right temple was cut and bruised, a branch of the temporal artery was exposed and bleeding, and his right leg lay in the everted position, but no other signs of injury were apparent. On trying to get him into a cart he would not allow us to bend his right hip. Examining him at home I could detect a swelling of the upper third of the right thigh, which he could not bear to have flexed. There was no apparent shortening, nor could I discern any crepitus, nor was there any apparent bruising of the hip. He complained of great pain all down the front of the thigh to the patella, and he had also considerable erectio penis. Next day the swelling had subsided and he felt better, but could still lift the leg only by the help of the sound one. The leg lay everted and on very careful measurement showed about half an inch of shortening. During the afternoon of this day he had two attacks of urgent dyspnœa, which I attributed to his former drinking habits, and in the evening he became violently delirious, sat up, bent his hip, and attempted to walk. During some of the movements I tried to discover any crepitus, but failed. The next day the swelling of the thigh had returned, no greater shortening could be made out, or crepitus, and during the night he died. After

death the right lower limb was found to be very evidently shortened by about three inches, and the right thigh appeared to be much broadened out. By using force I was able to undo the impaction and I found the seat of fracture quite at the root of the femoral neck.

The chief points of interest to me and those with which I was not absolutely familiar were the very slight amount of shortening which could be discerned and the absence of any evidence of severe bruising of the hip. The characteristic eversion of the foot, the broadened appearance of the thigh, and the helplessness of the limb were the chief signs of injury.

West Bridgford, Nottingham.

## THE ORCHITIS OF MUMPS.

BY CLEMENT DUKES, M.D. LOND.,
PHYSICIAN TO RUGBY AND SENIOR PHYSICIAN TO RUGBY HOSPITAL.

IN the elucidation of facts with regard to diseases it behoves us to be careful that our facts are real and universal and not subject to the alteration of time and circumstances. By virtue of a very long experience, dating from April, 1871, I have from time to time discussed the question of the orchitis of mumps. I have emphasised these supposed facts: (1) that the orchitis of mumps is not a metastasis; (2) that it almost invariably occurs on the seventh or eighth day of mumps, though occasionally mumps commences with orchitis on the first day, when it may occasion very alarming symptoms; (3) that it never arises before puberty; and (4) that it does not occur after puberty if the patient be kept in bed over the eighth day.

We have just passed through an epidemic of 30 cases of mumps at Rugby which indicates that my previous experience of the orchitis of mumps was inaccurate when applied over a long series of cases extending over many years, for this series of cases belies all my former ones.

| No. of case. | Residence. | Mumps. | Date. | Orchitis. | Date. | Day of orchitis from mumps. |
|---|---|---|---|---|---|---|
| 1 | G. S. | Right parotid. | Oct. 27, 1899. | Right. | Nov. 3. | Seventh day. |
| 2 | ,, | ,, | Nov. 13, 1899. | ,, | ,, 21. | Eighth ,, |
| 3 | P. S. | Both parotids. | Nov. 15, 1899. | ,, | ,, 20 | Fifth ,, |
| 4 | G. S. | Left parotid. | Nov. 16. 1899. | Left. | ,, 23. | Seventh ,, |
| 5 | P. S. | Right ,, | Dec. 6, 1899. | Right. | Dec. 9. | Third ,, |
| 6 | R. W. | Left ,, | Dec. 5, 1899. | Left. | ,, 11. | Sixth ,, |

Here, therefore, we have these facts—that out of 30 cases of mumps 20 per cent. developed orchitis, although not one of the boys moved from his bed for any purpose whatever for eight days; also the days on which the orchitis showed itself varied between the third and the eighth days, which is quite a new experience to me.

Rugby.

## A BOY'S EAR BITTEN OFF BY A HORSE.

BY JOHN MUNRO MOIR, M.D. ABERD.

IN THE LANCET of Dec. 2nd, 1899 (p. 1572), Mr. E. W. Cuming asks for information regarding any cases of the above accident. The following case may prove of some interest to him.

A few years ago I was called to attend the son of a patient of mine who while grooming his father's horse, or rather small pony, had one of his ears completely bitten off, quite as cleanly and neatly as if a surgeon had done it with a knife. The whole of the structure of the external ear was removed and was intact. It was some time after the accident before I saw the boy—I should say about two hours. The ear, which had been carefully preserved was cold and shrivelled up, and I regret that I did not adopt the treatment mentioned in the case referred to in THE LANCET of June 4th, 1898 (p. 1533), with such a successful result—viz., that of sewing on the severed ear. I thought that in my case there would be but little chance of union owing to the length of time elapsing from the occurrence of the accident until I saw the boy, but this will not deter me from doing so should I see another case. The disfigurement resulting from this accident is very marked; the organ is a very difficult one to model artificially, and even were this done successfully it would be difficult to attach it and keep it in position. Fortunately, as pointed out by Mr. E. W. Cuming, these accidents are rare.

Inverness.

# A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

## ST. BARTHOLOMEW'S HOSPITAL.

### A CASE OF SUPPRESSION OF URINE ASSOCIATED WITH A SINGLE KIDNEY.

(Under the care of Mr. D'ARCY POWER.)

FOR the notes of the case we are indebted to Mr. Percival Wood, house surgeon, and Mr. H. P. Johnson, dresser of the case.

A man, aged 36 years, was admitted into St. Bartholomew's Hospital on the evening of Saturday, August 26th, 1899, vomiting and saying that he had total suppression of urine. The patient stated that he had been in his usual health until Sunday, August 20th, when he passed no urine all day. He was not inconvenienced in any way and went to his work as usual on the Monday and afterwards had a bicycle ride. On the Tuesday he still felt in excellent health and went to his work, though he still passed no urine. On the Wednesday he did not feel well and stayed at home. On the Thursday he began to feel weak and to vomit and his condition became gradually worse until his admission to the hospital on the Saturday. He then had a slight headache and a little giddiness but "beyond the vomiting and weakness he did not feel much wrong." He had seen a medical man frequently during the week who passed catheters, but he had "not passed more than half an eggcupful of urine the whole week." His bowels were opened every day but only slightly. There was nothing of importance in his history. He had never had any abdominal pain suggestive of renal colic or any difficulty in passing urine. His urine had never contained gravel, blood, or sediment.

When the patient walked into the surgery he looked ill, his face was drawn, and he was very sallow. His skin was moist and his breath was foul, but there was no urinous odour about him. He was evidently very weak, but he did not seem to be giddy. He could see quite well and the pupils were equal and contracted. The pulse was very soft and was regular both in strength and frequency, beating 84 to the minute. The legs pitted slightly on pressure. The abdomen moved well. It was neither distended nor tender and except for a slight dulness in the right loin it was everywhere resonant. No tumour could be felt either in the bladder or the kidney region, the only abnormality being a slight muscular rigidity on the right flank. The heart and lungs were apparently normal, the respirations being 12 or 14 a minute. The face was not puffy anywhere; the tongue was dry and somewhat cracked. One eye was examined under atropine with the ophthalmoscope. The edge of the disc was slightly blurred, but otherwise the retina was normal.

A catheter (No. 10) was passed and went easily into the bladder; no urine was withdrawn. A sound was also introduced, but nothing was discovered. The diagnosis of obstructive suppression was made and the patient was therefore

admitted to a surgical ward, an opinion being further hazarded that the patient had only one kidney. Mr. D'Arcy Power saw the patient about two hours later and determined to explore the right kidney, being guided to this side by the muscular rigidity in the right flank. An incision was made in the right loin and a small contracted kidney was found lying high up under cover of the eleventh and twelfth ribs. The capsule was torn through, the pelvis of the kidney was explored with the finger and a needle was driven through the cortex in several places, but no stone was felt and the ureter was manifestly free from obstruction. The wound was accordingly closed and dressed, and when the patient recovered consciousness three hours later he appeared to be in the same condition as he was before the operation, being quite sensible, rather thirsty, quiet, and without pain or discomfort. On the next morning he was ordered a hot air bath at a temperature of 105°F., and almost immediately afterwards he passed voluntarily about three ounces of blood-stained urine. An hour later he passed another two ounces of urine, but shortly afterwards he became very restless and cyanosed, whilst his pulse began to intermit. This attack passed off after three minims of liquor strychniæ had been injected and half an ounce of brandy with water had been given by the mouth, and he had been made to inhale oxygen. He improved so much that his wife who was talking to him said it was difficult to understand that he was at all ill, but an hour later he vomited about half a pint of clear fluid, again became restless, and died in five minutes, remaining conscious and answering questions to within three minutes of the end.

*Necropsy.*—The post-mortem examination showed that both lungs were very œdematous and congested, and that both pleural cavities contained fluid. The peritoneal cavity contained about four ounces of serous fluid and there were several firm adhesions on the right lateral aspect of the liver, apparently caused by old perihepatitis. The left kidney was represented by a small thin piece of fibrous tissue of about the size and shape of a flattened horse-bean. The left ureter was small, but was present in its whole extent and was patent throughout its course. The left suprarenal capsule was normal and received a small vessel direct from the aorta. There was neither renal artery nor renal vein on the left side. The right kidney was somewhat smaller than usual and its pelvis was dilated. The capsule was adherent and on section the renal substance was seen to be granular and congested. The recesses of the pelvis contained four small pigmented calculi, the largest being smaller than a grey pea. The ureter was quite free in its whole course and the suprarenal was healthy.

*Remarks by* Mr. D'ARCY POWER.—The patient died from suppression of urine, the result, I suppose, of his single kidney striking work owing to the irritation of the calculi it contained. It is creditable to those who first saw him that the exact cause of the condition should have been diagnosed, though it is true that they are not entitled to the whole credit, for only a few days previously one of my colleagues had a similar case in which the single kidney was of the large white variety, whilst in the present instance it was small and contracted. The clinical history of the patient, so often wanting or imperfect, is unusually full and shows how little inconvenience was produced by the condition. The absence of the renal artery and vein shows that the left kidney was congenitally absent.

## WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.

### A CASE OF SUPRAPUBIC LITHOTOMY; REMOVAL OF TWO VESICAL CALCULI; RECOVERY.

(Under the care of Mr. T. VINCENT JACKSON.)

MANY considerations influence the answer to the question, What is the best method of removing a stone from the urinary bladder? The mortality resulting from the operation itself will naturally vary with the skill and experience of the operator whatever may be the operation performed. Of recent years so few cases of lateral lithotomy have been performed that no extensive statistics are obtainable; perhaps the best statistics of the operation of lateral lithotomy are those collected by Mr. C. Williams and founded on the cases at the Norfolk and Norwich Hospital. From 1772 to 1869 there were 871 lateral lithotomies at that institution and of these 116 patients died; this is a death-rate of 13·32 per cent. In boys the results were better still, for between the ages of five and 10 years there was a mortality of less than 4 per cent. It is probable that more modern statistics of lithotomy would show some improvement on these results, but it is unlikely that the mortality would be less than half of that exhibited in the Norwich statistics. The mortality of the modern operation of litholapaxy may be gauged from the following statistics. Mr. R. Harrison[1] performed 101 lithotrities from 1890 to 1897 and had six deaths—i.e., a little less than 6 per cent. Major R. Baker, I.M.S., has published[2] notes of 404 cases of litholapaxy which he performed in India. The mortality was under ½ per cent. It will thus be seen that the mortality in litholapaxy, though liable to vary, is certainly less than in lateral lithotomy. The percentage of recurrence after the crushing operation is higher than after lateral lithotomy, but with a very much lower mortality this is not of great importance. The results of the high operation of lithotomy also vary. Freyer, in a discussion at the Harveian Society that followed a paper on litholapaxy, said that suprapubic lithotomy in children had a mortality of 20 per cent.,[3] but this cannot be accepted as a representation of the danger of the high operation in general. Witte[4] had 32 cases of suprapubic lithotomy and four died, a mortality of 12·5 per cent. Lissjanski[5] had only one death in 18 cases, that is a death-rate of 5·5 per cent. The large size of the stone is generally considered to point to the desirability of performing lithotomy, but Milton[6] has said: "The larger the stone and the more exhausted the patient, the greater is the indication for lithotrity." In boys every method gives more favourable results than in men, but there is still much difference of opinion as to the most suitable operation. Mr. Jackson's interesting case is a very good example of the good results which may be obtained by the high operation.

A boy, aged eight years, was admitted into the Wolverhampton and Staffordshire General Hospital on July 19th, 1899, having been sent by Mr. A. T. Wills of Brewood. The history was very incomplete and indefinite; a family tendency was denied and only recent symptoms were mentioned such as frequent and painful micturition (day and night), the pain being referred to the end of the penis. Exercise added to the pain and produced a wish to defæcate. Upon examination the child was seen to be proportionately small for his age and spare of habit; indeed, he was a weakly and delicate-looking boy. The penis was small; the prepuce was long and its free margin was much reddened and thickened. The meatus urinarius and the capacity of the urethra were small. No hernia existed. Under chloroform a sound equal to a No. 3 catheter was inserted into the bladder, but it encountered a difficulty at the neck as if a stone projected. This was so, and it appeared to be of some size. The exploration with the sound was supplemented by the forefinger within the rectum and by a hand placed on the hypogastric region. The patient was admitted into the children's ward and his health and his diet were carefully attended to.

On July 29th under chloroform suprapubic lithotomy was performed. No rectal plug was used, but the bladder, first emptied of urine and carefully washed out, was distended with warm water. As the soft catheter was withdrawn the root of the penis was tied with tape. The bladder was opened above the symphysis pubis by cutting down to and into it. On the left forefinger being introduced two calculi were felt. One was almost free, except that its distal (spiked) end projected into what appeared to be the vesical end of the urethra; the second calculus, behind and somewhat under it, was lying in a pouch. Both were removed by a small pair of forceps and when placed together the measurements were one inch by one and a half inches. The sides of the bladder wound were approximated and so retained by Mr. H. D. O'Sullivan (the house surgeon) and then carefully stitched together, 12 fine silk sutures being inserted—six deeply and six superficially. The layers of the abdominal wall were closed separately by silk sutures; the wound was protected and sealed by a thick layer of cotton-wool and collodion, which was not changed for a week. A soft catheter was passed and retained in the bladder. It is unnecessary to encumber this report by recording the daily notes as the

[1] THE LANCET, Nov. 12th, 1898, p. 1250.
[2] THE LANCET, Sept. 11th, 1897, p. 648.
[3] THE LANCET, May 14th, 1898, p. 1330.
[4] Chirurgie, Band 1, Heft 2.
[5] Letopis Russkoi Chirurgii, 1896, Heft 3.
[6] Moscow International Medical Congress.

progress was uneventful. The cutaneous portion of the wound slightly re-opened and four silk sutures, being loose, were removed. On Sept. 8th the boy was sent home perfectly recovered.

*Remarks by* Mr. JACKSON.—This case is reported as a contribution to the treatment of vesical calculi in properly selected cases in male children by suprapubic lithotomy; indeed, it is the first child on whom I have so operated. If the stone is of small or even of moderate size and the age of the patient and the capacity of the urethra will permit, the case being uncomplicated, lithotrity is no doubt an excellent means of cure, but the case recorded belongs to another category and a different surgical proceeding was called for and successfully employed. If called upon to repeat this operation and the condition is favourable for closing the wound I shall not stitch together the abdominal wall layer by layer but close it by silkworm gut.

Every now and then a discussion arises in the medical journals as to the preferable operation — lithotomy or lithotrity—for the removal of stone from the bladder of boys. In reading these discussions and the opinions expressed I have been struck by the rather too dogmatic and *doctrinaire* tone adopted by those who so strongly and almost as partisans advocate the modern method of treating stone in the bladder (lithotrity). I fail to see that it is possible for any one method, modern or otherwise, to be equal or sufficient to the varying conditions met with in infants—and shall I also add octogenarians—who may be the unfortunate sufferers from such a painful, distressing, and destructive malady as vesical stone.

The great promoter and supporter of lithotrity in this country, Sir Henry Thompson, skilful and successful as he has ever been, never held the cramped opinion that lithotrity had superseded lithotomy and that the performance of the latter instead of the former was "retrograde," "old-fashioned," "eccentric," and "out of place." I plead for the permissive right of an operating surgeon to be allowed to select what in his judgment is the best and the most likely operation to be successful in any given case under his care. There ought not to be, and there cannot be, a hard-and-fast line in surgical treatment, for much of that must depend on individual experience. Mr. Reginald Harrison, in the Bradshaw Lecture (1896) dissents from the tendency existing at the present day to relegate lateral cystotomy to the surgical shelf. Lithotrity is a very easy operation, lateral lithotomy is not, and without saying that lithotomy is boycotted on account of its difficulty I feel that it still holds a place in the art of surgery and its employment for the removal of suitably sized calculi in very young male children is not only a safe but a successful, preferable, and complete procedure.

I desire to thank Mr. H. D. O'Sullivan and charge nurse Middlemist for their post-operation supervision, care, and attention.

# Medical Societies.

## EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

*Exhibition of Cases and Specimens.*

A MEETING of this society was held on Dec. 20th, and was devoted to the exhibition of patients and specimens, Mr. A. G. MILLER, the President, being in the chair.

Dr. ALEXANDER BRUCE showed: 1. A case of Infantile Paralysis affecting the muscles of the left hand. The patient was a girl, aged 19 years, and the history given was that when she was a child a few weeks old she received a stroke on the back of the left hand and that soon afterwards the hand was noticed to be paralysed. Her present condition showed that the left hand was much smaller than the right and that every intrinsic muscle of the hand was atrophied. The muscles of the forearm were normal and there was no sensory disturbance. The lesion had apparently affected the first dorsal segment of the cord, and the history given was deceptive in that the case was one of infantile paralysis. 2. A case of Progressive Muscular Atrophy of the Peroneal or Charcot-Marie type. This case differed from the ordinary type in that there were no evidence of the disease occurring in the other members of the patient's family or ancestors (she was a woman past middle age) in that the patient was rather beyond the age at which the disease usually appeared, and in the fact that the trunk muscles were beginning to be affected also. The paralysis began after pain in the legs and now there were drop ankle and contracture but no sensory disturbance. The peroneal muscles were atrophied. The hands became affected later and now showed the well-marked claw character, with some ulnar flexion. The forearm was somewhat atrophied and there was some spinal curvature. The lower lip was relaxed and there was some deficiency in articulation. It was a purely muscular paralysis and at an early period the reflexes underwent diminution. The affection was evidently a parenchymatous neuritis spreading centrally to the posterior columns of the cord. 3. A case of Senile Chorea (exhibited for Dr. J. O. Affleck) in a gamekeeper who until he fractured his leg eight years ago was perfectly healthy. A year after the accident a chorea manifested itself. It affected the head, as well as the rest of the body. There was no symmetry or rhythm in the movements and the patient had difficulty in speaking on account of the choreic movements of the tongue and lips. 4. A case of what might be called Huntington's Chorea but which Dr. Bruce thought was a true and typical Convulsive Tremor, though some might say that it was due to hysteria. The patient, a man, had syphilis five years ago and two years subsequently the affection began by a difficulty in standing and now there was a peculiar condition of tremor which affected chiefly the thighs and calves. In the upper extremity shrugging movements of the shoulders were visible. In the legs sharp jerking movements were seen, and rapid flexions and extensions of the feet took place. On lying down the legs were jerked upwards at the thighs and rotation at the hip joints was noted. There was no anæsthesia. The toes underwent flexion and extension, as did also the thumbs to a less extent. All these movements were less marked when the patient walked, or during sleep, or when he was at perfect rest, and were aggravated when he was excited. There was great hyperæsthesia in the muscles. By tapping over each it could almost always be made to contract. The patient's memory was not so good as it had been. Dr. Bruce did not think that it was a case of hysteria. 5. A case of Injury to the Lumbo-sacral Nerve-roots. The patient was a young man who fell downstairs and injured his left hip. Two days after the accident his left limb became powerless and in three weeks it was anæsthetic. The lesion seemed to affect the first and second sacral roots and as the bladder and rectum acted well it was thought that the other sacral roots must be intact. The injury must have affected the roots of the cauda equina on one side. Dr. Bruce pointed out the areas of motor and sensory paralysis and noted that the case was complicated by the fact that after the patient left the hospital after the accident he imbibed freely of alcohol and so superimposed on the traumatic an alcoholic neuritis.

Dr. NORMAN WALKER exhibited: 1. A man suffering from the rare condition of Acne Necrotica or acne varioliformis, as it is sometimes called from the scarring. The only resemblance which this affection bore to ordinary acne was that it occupied similar seats. It was a necrosis of the whole skin and bore no evidence of a syphilitic cause, Dr. Walker believed. 2. Two cases of Ichthyosis in the same family. 3. Cases treated by the X Rays. Dr. Walker had only employed this treatment in those cases of skin disease where he deemed that it would be most likely to do good—as, for example, in cases of lupus and favus. These rays caused complete loss of hair, which re-grew later. One of the cases shown was that of a girl who had suffered from favus for 10 years and had undergone repeated treatment. She was first treated by the x rays in the spring of 1899 and now the head was quite free from disease. Dr. Walker showed three cases of lupus which had been treated thus and which were very greatly improved. 4. A case of Leprosy in a young man (exhibited for Dr. Allan Jamieson). There was a patch on the left forearm with an anæsthetic centre, also a nodule near the right breast. The nerves had not undergone any thickening.

Dr. ALEXANDER JAMES showed two cases of Hypokinesis. 1. The patient was a girl, aged three and a half years. The condition affected the right leg, arm, and hand, which were all smaller in size than were the same members on the left side. The loss of power was chiefly in the extensor muscles, as shown by the fact that when she grasped anything with the right hand she had to employ the left hand to open the fingers so as to free the object. There was loss of power on the right side and the condition

had persisted since she was 18 months old. The child suffered from tuberculous abscesses of the bone in the left leg, arm, forehead, &c., when she was seven months old. These healed and then the brain trouble showed itself. The child could not walk, but the right arm had improved under treatment, which had in part consisted in tying up the left hand so as to make her use the right. 2. The patient, a girl, aged 15 years, suffered from epileptic attacks which chiefly affected the right arm but also the face and leg on the same side occasionally. There was also loss of consciousness with some of these attacks. For four or five days at a time peculiar, perfectly regular, tremors persisted. The right arm and leg were weaker and the reflexes were increased. There had evidently been a cortical lesion.

Dr. GEORGE GIBSON showed a man with Pseudo-bulbar Paralysis. He had weakness on both sides of the face and the tongue and difficulty in vocalisation. All the muscles supplied by the seventh cranial and the posterior nerves were greatly weakened, but there was no wasting. He had gradually also developed a spastic condition at first confined to the lower extremities, but now this had invaded the upper extremities. The muscular reactions were increased.

Mr. HAROLD STILES showed: 1. An infant, five months old, after operation for Acute Ileo-cæcal Intussusception. 2. A boy after Mikulicz's Operation for Disease of the Posterior Tarsus. 3. A patient who suffered from Acute Thyroid Cachexia after excision of a suppurating goitre. Both the mother and a sister of the patient had goitres. The patient suffered from great breathlessness and the tumour underwent enlargement very rapidly. The tumour extended behind the sternum and far up in the neck and was difficult to remove on account of the inflammatory adhesions. Two days after the operation the patient developed a strange mental condition. She was "dour" and would not answer questions. Then jaundice supervened and she complained of pains all over her body; the face twitched and she refused food. Immediately after the administration of thyroid extract this apathy disappeared and she was now perfectly well. 4. A man after Excision of a large (simple or malignant?) Lymphoma. The tumour grew very rapidly and the patient's general health deteriorated. The tumour, which was on the right side of the neck, was large and smooth, and the adjoining lymphatic glands were enlarged. The diagnosis was that of tuberculosis or lympho-sarcoma, the latter being more probable. The tumour on section had all the appearances of a medullary tumour. The wound healed rapidly, and some small but hard glands soon disappeared, and three months after removal there was no recurrence of the growth. Microscopically the tumour was that of a lympho-sarcoma. 5. A girl after Avulsion of the whole Scalp. The accident was a machinery one, and the scalp from the forehead to the neck, with part of one ear, was torn away. Two inches of the right parietal bone were bare of pericranium. At first the discharge was great, but now the granulations were less florid and had grown over the bare parietal bone which had not exfoliated. Entire skin grafts had been tried repeatedly and for from two to three weeks had seemed to do well, but these had been eaten up by the granulations. The patient lately while at home had erysipelas but she had now returned for fresh treatment.

Dr. F. D. BOYD exhibited: 1. A man with signs and symptoms of Syringomyelia: diminished visual field; sense of smell almost gone; ocular muscles normal; right trapezius partly paralysed; loss of power in the grasp of both hands; complete paralysis of the right palate and of the abductor of the right vocal cord; some loss of sensation in the palm of the left hand, and atrophy of the thenar and hypothenar eminences and of the interossei. On both sides the deltoid and supra-spinatus muscles were paralysed. 2. A case of Neuritis in a man with Involvement of Both Facial Nerves. After an attack of alcoholic jaundice the patient developed pains all over his body and he was found to be suffering from peripheral neuritis in the legs and arms. In addition he had extreme pain in the angle of the jaw, and over the course of the left facial nerve there was great tenderness with later complete paralysis of the muscles. The right nerve became similarly affected, as did also the motor branch of the fifth nerve. He was now greatly improved. 3 A case of Neuritis after Confinement, to illustrate the question of prognosis. Following on parturition the patient developed a peripheral neuritis with complete ankle- and some wrist-drop. The organic reflexes were abolished and the mental condition was impaired greatly. She had now practically entirely recovered.

Dr. A. C. SYM showed the Trachea, &c., from a case of sudden death due to morbus Ludovici.

Mr. J. M. COTTERILL showed (1) a specimen of a Tumour of the Brain; and (2) two specimens of Urethral Calculi.

Dr. R. B. PURVES showed a specimen of Exostosis of the Femur.

## ROYAL ACADEMY OF MEDICINE IN IRELAND.

### SECTION OF MEDICINE.

*The Pulmonary Second Sound.—The Examination of Sick Children.*

A MEETING of this section was held on Dec. 15th, Dr. J. W. MOORE, the President, being in the chair.

Dr. J. F. O'CARROLL read a paper on the Pulmonary Second Sound and dealt chiefly with the significance of accentuation of the second sound in the pulmonary area.—Sir CHRISTOPHER NIXON, the President, and Dr. J. KNOTT discussed the paper.

Mr. LANGFORD SYMES read a paper on the Examination of Sick Children. The paper dealt with the differences to be observed in children's diseases from those of adults. The organs were taken *seriatim* and in each case its peculiar diseases set forth in the following order: (1) history; (2) "facies"; (3) head; (4) frame and bones; (5) reflexes; (6) eyes, ears, and nose; (7) glands; (8) abdomen; (9) heart; (10) lungs; (11) spine and neck; (12) mouth and throat; and (13) nervous system. In children every organ must be examined, for the discovery of disease could be thus alone secured. Information could not be obtained from the child, the friends were also in ignorance, and so the child was entirely dependent on the physician's powers of physical examination. It was pointed out that mistakes were made almost exclusively from want of examination. No branch of practice of medicine entailed such a pitch of refinement in physical examination, and it formed the best, although severest, school for the clinical investigation of disease.—Mr. DOYLE said that very often in examining sick children it was necessary to resort to an anæsthetic, as he experienced in a recent case under his care of hæmorrhage from the bowel. On making a rectal examination under chloroform he discovered a polypus which was subsequently removed.—Dr. O'CARROLL said that the complaints of children might in many cases be due to the suggestive influence of the parent. Children were also quite as liable to hysteria as adults. He did not consider reflexes of much value in examining children under two or three years of age, as the lateral tract was then ill-developed.—Dr. KNOTT and the PRESIDENT also took part in the discussion.—Mr. SYMES, in reply, alluded to the lack of teaching in diseases of children in Ireland. Now that distinct sections in their associations, separate hospitals, professors and lecturers existed in England, the continent, and America, the subject should no longer be neglected.

EDINBURGH OBSTETRICAL SOCIETY.—A meeting of this society was held on Dec. 13th, Dr. Milne Murray, the President, being in the chair.—The President showed a Double Uterus with a Cystic Tumour of the Ovary.—Professor A. R. Simpson showed an Anencephalic Fœtus with some Spina Bifida. It was accompanied by hydramnios, which could not be accounted for by fœtal urination, as the kidneys were small and the bladder showed no signs of having ever been distended.—Professor J. A. C. Kynoch (Dundee) read a paper on Vaginal Cœliotomy. After discussing the history of the operation the technique and different methods were described. In anterior colpotomy the incision might be transverse or longitudinal, the latter being more safe for the ureters. The cellular tissue was then pushed through with the finger in multiparæ and with the aid of scissors in nulliparæ. The peritoneum was exposed and divided; this was accomplished safely by puncturing with long sinus forceps and then separating the blades. The fundus uteri could be brought through the opening and examined, and the appendages could also be inspected and removed if necessary. Drainage, when necessary, was best carried out by the posterior fornix. One of the indications for the operation was in the treatment of retroflexion by vaginal fixation where the symptoms were not relieved by pessary and other treatment. But against

its performance was the increasing number of reported cases where operative interference (including Cæsarean section) had been found necessary when labour had occurred in these cases, but it would be suitable for cases at or near the menopause. Inversion of the uterus, if irreducible by other means, might be treated by posterior or anterior colpotomy and the finger then inserted to dilate the constricting ring. A vaginal fixation had been carried out after the reduction. Prolapsed ovaries which were much inflamed and fixed and had resisted other treatment could be easily removed by posterior colpotomy. Extra-uterine pregnancy, which had ruptured, causing diffuse intra-peritoneal hæmorrhage without the formation of a hæmatocele, was universally advised to be treated by abdominal section, but if the condition had been diagnosed before rupture up to the eighth or tenth week the intact tube could be removed by vaginal section. Dührssen gave a table of 19 cases operated on in this way with one death. Ovarian cysts could be removed by vaginal cœliotomy, but the proceeding was not viewed with general favour. Schauta reported 23 cases with one death and limited this method of removal to non-malignant moveable tumours, free from adhesions to the bowel. Colpotomy might be employed in cases of phthisis, cardiac affection, and in other conditions likely to be aggravated by subsequent parturition, to reach the tubes, ligature, and divide them. The advantages claimed for the vaginal route over the abdominal were: (1) shorter convalescence—14 days as compared with from three to four weeks; (2) no abdominal cicatrix, and therefore no tendency to hernia or intestinal or omental adhesions; and (3) less shock on account of the peritoneum being less exposed. Drainage, when necessary, was best carried out through the posterior fornix. Its disadvantages were: (1) on account of the limited space dense adhesions were more difficult to manage and consequently there was greater danger of wounding the bladder and rectum; and (2) there was greater difficulty in rendering the vagina aseptic, but this was probably exaggerated.—Professor Simpson, Dr. N. T. Brewis, Dr. F. W. N. Haultain, and others took part in the discussion.—Dr. Milne Murray read a paper on Pyosalpinx removed by Laparotomy in the Early Puerperium. The patient had been complaining of profuse menses and debility before she became pregnant with her second child. During her pregnancy she had been complaining of a pain in the left ovarian region which occasionally had been very severe, compelling her to lie down for some hours at a time. A child was born with the aid of forceps. The patient's temperature continued about 101° F. till the third day, when it rose to 103·5°. On opening the abdomen and passing the hand down into the left side of the pouch of Douglas many recent adhesions were found which readily gave way. The left tube and ovary were brought out; the tube was intensely congested, much dilated, and to all appearance empty. These were removed; those on the right side were examined and found to be fairly healthy and returned. The recovery was uninterrupted and the uterus underwent normal involution. On examination of the tube pus was found in it at the uterine end. The onset of the symptoms was probably associated with the escape of the purulent contents of the tube into the abdominal cavity.—Dr. G. Simla Paterson read notes on a case of Sudden Death following Labour. The patient was a secundipara, aged 32 years. At the post-mortem examination the heart was found to be affected with both aortic and mitral stenosis. The lungs were markedly congested and portions of both showed microscopically brown induration, chronic congestion, and a recent fibrinous pneumonia. The left kidney was completely cystic and was found to contain a large quantity of tuberculous pus. The right kidney showed signs of chronic nephritis.

SOCIETY OF ANÆSTHETISTS.—At a recent meeting of this society Dr. J. Frederick W. Silk, the President, read a communication from Mr. Walter Edmunds describing a Paper Inhaler for use with Junker's Apparatus for the Administration of Chloroform, the object being to use a new paper in every case.—Mr. W. G. Copestake (Derby) read a paper on a New Inhaler for Ether, Chloroform, or Mixture, the face-piece of which was made of celluloid; he utilised a portion of the angular tube of Clover's inhaler, to which he attached an indiarubber tube by a short brass one. In giving ether he used a flat thin bottle provided with tubes similar to Junker's, the longer one, which reached to the bottom of the bottle, being perforated with a number of small holes. He used Mr. Krohne's indiarubber bellows. The advantages of the inhaler in regard to ether were that in the early part of the administration there was little or no bronchial irritation, there was less struggling or spasm, no cyanosis, much less sickness after recovery, and considerable saving of ether. When chloroform was used the action of the inhaler was the same as that of Junker's; when a mixture of equal parts was used the inhaler combined the action of the two drugs. He had noticed that œdema of the lung occurred much less frequently since he had used the inhaler described.—Dr. G. B. Flux read a paper on a Small Contrivance for use in the Administration of Chloroform. A small metal cylinder was attached at the upper end to the inlet of a ball bellows the delivery tube of which led directly to a face-piece. The cylinder contained cotton wick and chloroform was poured on it through the lower open end. The instrument was light, portable, and easily managed and it possessed the advantage that both the strength and the amount of the mixture were absolutely under control.—Mr. Rickard Lloyd asked how much longer Mr. Copestake took in putting a patient under ether by his apparatus than by Clover's apparatus. With regard to Dr. Flux's paper Mr. Lloyd wanted to know the definite amount of chloroform taken into the bellows each time.—Mr. Carter Braine asked if any stout and plethoric men had been anæsthetised by Mr. Copestake's method and whether the perforations of the tube got blocked up.—Mrs. Dickinson Berry asked if Mr. Copestake's apparatus could be adapted for the preliminary giving of gas.—Mr. Edgar Willett said that he did not see how the absolute precision could be gained which Dr. Flux claimed for his apparatus.—Dr. Dudley Buxton thought that Mr. Copestake was employing a principle which was absolutely wrong with regard to ether. He did not wish to be ungracious or to attempt to throw cold water on those who brought new apparatus before them, but he was sure that Mr. Copestake and others wanted to hear the candid opinion of the members of the society.—The President said that Mr. Copestake's instrument if used with chloroform seemed to be running against one of the primary axioms of chloroform inhalation in having anything in the nature of a bag attached to a chloroform inhaler. He had found Dr. Flux's apparatus of very great advantage in keeping patients under anæsthesia, but it was rather a difficult matter to work the bellows and to get gross alcoholic patients under.—Mr. Copestake, in replying, said that by his apparatus the time taken was two or three minutes longer than with a Clover, and he could not say that he had had much experience with fat or alcoholic patients. To use his apparatus in conjunction with gas a little tube was merely required to be soldered on to any apparatus which had a face-piece.—Dr. Flux, in reply, said that the air passing through his apparatus would only convey chloroform to the extent of the temperature of the air as it emerged from the chloroform, and that would not be above the temperature of the medium through which the air passed.—Mr. W. J. McCardie read notes of a case of Respiratory and Cardiac Failure during Administration of Chloroform to a patient probably of so-called lymphatic diathesis and Mr. Rickard Lloyd narrated the facts of a case which was under his care.—The President, Dr. Dudley Buxton, Mr. Carter Braine, and Mr. Grant Morris took part in the discussion which ensued, and Mr. McCardie and Mr. Rickard Lloyd having replied the President concluded the meeting by announcing that on Feb. 2nd the society would discuss the Sequelæ of Ether and other Anæsthesias more especially with regard to pulmonary complaints.

WINDSOR AND DISTRICT MEDICAL SOCIETY.—A meeting of this society was held on Dec. 20th at the Guildhall, Windsor, Mr. W. Arnold Thomson (one of the Vice-Presidents) occupying the chair.—21 new members were elected, bringing the membership of the society up to 85.—The discussion on Temperature in Health and Disease, introduced at the November meeting by Dr. M. S. Pembrey, was resumed by Dr. E. B. Hulbert, who read notes of an obscure cerebral case which was under the care of Dr. Charlton Bastian some years ago in University College Hospital and in which the temperature on several occasions attained an unusually low level, the minimal rectal temperature being 81·6° F. and the cutaneous temperature at the same time 75·5°. The patient, a man, aged 38 years, after a stay of 12 weeks in hospital died comatose, the temperature directly after death rising to 104·8° in the rectum.

A large chart of the temperature was shown and a number of authorities on the subject of hypothermia were quoted.—Mr. W. F. Lloyd said that he did not consider that in fracture of the cervical spine the rise of temperature was due to the hot water bottles with which the patient might be surrounded. He had devoted much attention to the subject of the specific heat of the human body and he calculated that the amount of boiling water required to cause the temperature of a patient weighing 10 stones to rise 7° F. would be seven and a half pints and that amount would have to be poured into the patient's body, so that none of the heat should be lost. In many cases requiring operation he thought the subsequent fall of temperature was due rather to the evacuation of pus than to the anæsthetic.—Deputy-Surgeon-General H. Cayley referred to the post-mortem rise of temperature in cases of cholera, often amounting to 6° or 7° in a few hours, and said that under these circumstances the pathologist's hands experienced the sensation even of being "burned."—Mr. R. Shalders Miller said that he had seen a case of ascending neuritis of gouty origin in which the temperature marked 109°, and had successfully treated by cold effusions a patient who, whilst suffering from puerperal eclampsia, developed a temperature of 108°.—Mr. E. Weaver Adams quoted the case of a patient, formerly under the care of Dr. D. Ferrier, who developed a temperature of 110° without obvious cause, all precautions having been taken to ensure a genuine record. He also quoted the case of a man suffering from syringomyelia who, directly after an operation for hernia, presented a reading of 105°, there being nothing in the condition of the wound to account for it.—Dr. A. J. Anderson, Mr. H. E. Bruce Porter, and others also took part in the discussion.—Dr. G. Leslie Eastes, Director of the Clinical Research Laboratories, London-bridge, S.E., next gave a Bacteriological Demonstration very practical in character and illustrated by apparatus and microscopical preparations. After a demonstration of Widal's test he passed on to puerperal fever, the varieties of "septicæmia" (so-called) being distinguished. The diagnosis of septicæmia in difficult cases could be made by an examination of the blood, and he advocated the "cultural" rather than the "direct" method. A swabbing from the uterus was also sometimes useful and the correct method of obtaining this was described. If streptococci be found both in the blood and in the swabbing there was certainly justification for using the serum. If the blood was sterile but streptococci were found in the swab its use was still justified, because the result under such circumstances was still inconclusive, and because the serum would act as a prophylactic. He then treated of streptococcal infection in other parts of the body and called attention to the fact that streptococci were normal inhabitants of the mouth, the large intestine, and the vulva. Occasionally the streptococcus was the cause of certain cases of food-poisoning. He had himself found them in 80 per cent. of some 200 samples of mixed milk which he had examined. From culture observations which he had made Dr. Eastes believed that this micro-organism was identical with that of bovine mastitis, that it would be proved to be pathogenic for man, and if so that the use of such milk unboiled was the probable cause of a certain proportion of the cases of autumnal diarrhœa in infants.

BRITISH GYNÆCOLOGICAL SOCIETY.—A meeting of this society was held on Dec. 14th, the President, Dr. Macnaughton-Jones, being in the chair.—Dr. E. Doyen of Paris, who had come over expressly for the purpose, gave an admirable demonstration of Gynæcological Operations by means of the Kinematograph. He first referred to the progress of surgery during the present century as being the result of the introduction of anæsthesia and antisepsis, and then described how he had set himself, when he first practised surgery, to the task of simplifying technique and of shortening the duration of major operations. He sought to apply to abdominal surgery the established principles of the operative surgery of the extremities as practised by the pre-antiseptic surgeons. He was glad to think that his efforts had been crowned with success. He passed on to consider the value of the kinematograph as a teaching instrument, pointing out that the teaching of operative surgery for such operations as could not be demonstrated on the dead body had always been much inferior to the teaching of clinical surgery and of surgical pathology. Too few students could follow with profit the details of such operations in the operating theatre. The kinematograph would fill this blank and complete the surgical training given to students in the future. Dr. Doyen then proceeded with his demonstration as follows:—(1) 14 slides showing the steps in an ovariotomy and the details in the use of Doyen's lever clamp-forceps; (2) a complete kinematographic representation of an ovariotomy; (3) 24 slides illustrative of Dr. Doyen's method of abdominal hysterectomy; (4) kinematographic reproductions of three abdominal hysterectomies; (5) 38 fixed slides illustrating the technique in vaginal hysterectomy; and (6) four vaginal hysterectomies as recorded by the kinematograph, showing the possibility of demonstrating to hundreds what half a dozen could not see so well in an operating theatre. After the gynæcology demonstration Dr. Doyen showed, by special request, a kinematograph of a nephrectomy and of a thyroidectomy.—Dr. C. H. F. Routh moved a hearty vote of thanks to Dr. Doyen for his most excellent, interesting, and instructive demonstration and for his kindness in coming over from Paris expressly to give it.—This was seconded by Mr. W. D. Spanton of Hanley, supported by Dr. Clement Godson, and carried with enthusiasm.

LIVERPOOL MEDICAL INSTITUTION.—A meeting of this society was held on Dec. 21st, Dr. Macfie Campbell, the President, being in the chair.—The following resolution, proposed by Mr. T. M. Dawson and seconded by Dr. J. J. O'Hagan, was carried:—

Owing to the fact that the present war in South Africa has necessitated the calling out of our Reservists and Volunteers for active service, many of whom have left behind them wives and families in straitened circumstances, we, the members of the Medical Institution, are willing to give our professional services gratuitously to the said wives and families provided that the cases are authenticated by some recognised authority and that our services do not interfere with the relations of such families and their present medical attendant.

—Dr. William Carter read a note on Digestives, demonstrating the inutility of many vaunted preparations and counselling adhesion to the British Pharmacopœia preparations of pepsin.—Mr. Laird Pearson, Dr. J. C. M. Given and Dr. J. J. O'Hagan spoke.—Dr. T. B. Grimsdale related a case of Fibroid Tumour of the Uterus which produced Ascites. The patient was a woman aged 67 years. The tumour had existed for years and the menopause occurred at fifty years. For twelve months the abdomen had increased in size and she had difficulty in getting about. The skin of the abdomen was tense and shiny and the girth measurement was 40 inches. The abdomen was opened, liberating two gallons of ascitic fluid, and a hard solid tumour was removed from the uterus, its attachment to the uterus was severed, and the stump was sutured by a continuous suture. The patient made a good recovery.—Dr. J. E. Gemmell and Dr. J. J. O'Hagan spoke.—Dr. Charles MacAlister read notes of two cases of Chronic Parenchymatous Nephritis, illustrating the good results following prolonged treatment.—Dr. William Carter bore testimony to the Utility of Mercury and Morphia in some cases of Bright's Disease.—Dr. G. G. Gullan and Dr. F. H. Barendt spoke.—Dr. John E. Gemmell read a paper on Ectopic Pregnancy.—Dr. R. J. M. Buchanan observed that in the microscopic examination of doubtful specimens he had found nucleated red blood corpuscles when he had failed to find chorionic villi, and suggested that their presence was of considerable importance and they should always be looked for.

CLINICAL SOCIETY OF MANCHESTER.—A meeting of this society was held on Dec. 19th, Dr. Judson S. Bury, the President, being in the chair.—Mr. Thomas Jones made some remarks on Fixation of Flail-like Joints (Arthrodesis) and showed cases.—Mr. E. Stanmore Bishop reported the case of a married woman, aged 26 years, who had one child five years of age and had had one miscarriage three and a half years before, from whom, in 1897, he removed an ordinary ovarian cyst springing from the right side. Recovery was complete and the patient remained in perfect health until July, 1899, when she was attacked by severe pain in the left iliac region. The menstrual flow came on at this date and was normal in time but excessive in quantity and associated with much more pain than usual. From this date she believed herself to be pregnant, having morning sickness, enlarged breasts, &c. The periods recurred twice, each time greatly accentuating the pain, which was continuous in the left side and passing down the thigh. The last menstrual flow was shreddy and the pain was described as "labour pains." Vagino-bimanual examination revealed a small,

painful, elastic mass by the side of a normal uterus and not continuous with it. Abdominal section was performed and the mass was removed. The patient made a good recovery. On and after removal the mass closely resembled an unruptured ectopic pregnancy but was found to consist of a small ovarian cyst surrounded by the dilated tubal ampulla which had become firmly adherent to it. Mr. Bishop described the case as illustrating the difficulty of abdominal diagnosis even after laparotomy. The specimen was shown.—Dr. A. T. Wilkinson read a paper on Acute Pleural Effusion, with special reference to diagnosis and treatment.

NORTH OF ENGLAND OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.—A meeting of this society was held at Owens College, Manchester, on Dec. 15th, the President, Dr. A. Donald, being in the chair.—Dr. J. E. Gemmell of Liverpool showed a Fœtus and Placental Sac from a case of Abdominal Pregnancy. The mass was removed by abdominal section, the patient making a good recovery. Microscopic sections of the Fallopian tube were shown. The rupture had occurred close to the uterine end of the tube and the placenta had developed mainly in the expanded and everted Fallopian tube.—Dr. J. B. Hellier showed: 1. A Uterus with Multiple Fibroids and Double Pyosalpinx Removed by Pan-hysterectomy, carried out by the "combined" method." The patient made a good recovery. 2. A case of Vesicular Disease of the Great Omentum.—Dr. D. Lloyd Roberts showed a Cystic Tumour of the Kidney of the size of an adult head. The tumour was successfully removed by abdominal section.—The President then gave a Presidential Address entitled Minor Gynæcology. In reviewing the changes which had occurred in the practice of minor gynæcology during the last 15 years he dwelt especially on the following four points: (1) the use of pessaries; (2) the use of the uterine sound for diagnosis and treatment; (3) caustics and other irritants in the treatment of cervical catarrh; and (4) the methods adopted in outpatient practice for the management of minor gynæcological ailments. He thought that there was considerable divergence in our practice from that which prevailed widely in the early "eighties."

# Reviews and Notices of Books.

*Encyclopædia Medica.* Under the General Editorship of CHALMERS WATSON, M.B., M.R.C.P. Edin. Vol. II.: Brachial Plexus to Digestion. Edinburgh: William Green and Sons. 1899. Pp. 562.

IN our review of the first volume of this publication we commented on its general scope. The articles in the present volume are, as a whole, better than those which appeared in its predecessor and doubtless as a work of reference it will be found valuable by the general practitioner. The contributions on Brain are particularly good and are five in number, each written by a different author. Dr. A. Bruce writes an able paper on the Physiology of the Brain, and the complex structure and the functions, so far as are at present known, are well described. Dr. James Taylor contributes a praiseworthy article on Affections of Blood-vessels of the Brain. Some of the articles in the first volume had apparently been needlessly curtailed, but Dr. Taylor considers at length the pathological lesions connected with anæmia, hyperæmia, and œdema of the brain, cerebral hæmorrhage, thrombosis and embolism, and details the conditions which may result from the vascular lesions. Dr. Risien Russell's original researches amply qualify him to write on Cerebral Tumours, and later in the book he also has an article on the Cerebellum, and in both he shows a knowledge of his subject which makes his contributions specially valuable. Dr. P. A. Fleming writes on Atrophy, Hypertrophy, Inflammations, and Cysts of the Brain, and Mr. J. M. Cotterill on Intracranial Surgery, the latter article being particularly interesting.

Dr. Arthur Voelcker's contribution on Bronchial Glands contains much that is interesting and Dr. Watson Williams's paper on Bronchitis, although containing nothing that is new, is a good summary of our present knowledge on the subject. The subject of Bronchiectasis is dealt with by Dr. S. H. Habershon. He speaks favourably of the treatment by the continuous inhalation of creasote. It is probably more successful than any other method in severe cases but has the disadvantage of requiring a room to be set apart for the purpose. The subject of Cataract has been left in the hands of Mr. G. A. Berry and the author has accomplished his task very ably. The question and modes of operation are fully discussed and special attention is paid to the after-treatment of cataract extraction.

A useful paper on the Development and Clinical Examination of Children is contributed by Dr. John Thomson. It shows the results of experience and close observation and contains many useful hints that practitioners will do well to take advantage of.

Dr. Andrew Davidson's article on Asiatic Cholera will probably receive some attention, especially his remarks on Prophylaxis.

We would also commend to the notice of our readers Mr. H. E. Juler's paper on Diseases of the Choroid. The main part of it is naturally devoted to a description of the various forms of choroiditis, but observations are also made on the manner in which tubercle may attack the choroid and also on sarcoma of the choroid.

A good account of Diseases of the Colon is given by Dr. W. Hale White. In describing membranous colitis two varieties are noticed, one which he terms "dyspeptic membranous colitis," because the sufferers from it complain much of dyspepsia while exhibiting the characteristic symptom of passing membrane by the bowel, and the other "secondary membranous colitis"; this latter form is always associated with some other grave condition or is due to direct injury. For the treatment of severe membranous colitis in which all means of relief by ordinary methods have been tried in vain, Dr. White advises that the colon should be opened on the right side, so as to give the diseased bowel complete rest; after some time the artificial anus may be closed. The published cases in which this course has been followed are on the whole encouraging.

Another interesting article is that by Mr. T. H. Bickerton on Colour Vision. The "physiological considerations" are expressed clearly and at length and preference is given to the theory first expounded by Young and Helmholtz, based on the assumption of the existence of three kinds of nerve-fibres identical as to structure and construction but terminating in different end-organs endowed with photo-chemical substances respectively sensitive to the three primary colours—red, green, and blue.

Mr. A. H. Tubby writes on Deformities, and he has managed to compress a large amount of information into a comparatively small space.

Amongst other contributions we may mention the following:—Dermatitis Herpetiformis, by Dr. J. J. Pringle; Dermatitis Repens by Dr. Radcliffe Crocker; an excellent article on Diabetes Mellitus by Dr. R. T. Williamson; and Cretinism by Dr. John Thomson.

*Laboratory Work in Bacteriology.* By FREDERICK G. NOVY, Sc.D., M.D., Junior Professor of Hygiene and Physiological Chemistry, University of Michigan. Second Edition. Ann Arbor: Geo. Wahr. 1899. Pp. 563. Price $3.00.

IN the University of Michigan all students of medicine have to attend a practical course of bacteriology which occupies every afternoon for a period of 12 weeks. It is not unlikely that a time may come when as thorough a course will form a necessary part of the student's curriculum in this country. If it does so the scheme of laboratory work set forth in this volume by Professor Novy will be found as

useful, comprehensive, and thorough as could be wished. It differs in many respects from most of the similar works with which we are acquainted. It is not purely a laboratory course of instruction. The first five chapters are devoted to general bacteriology and contain such an account of the morphology, classification, life-history, and chemistry of bacteria as to render intelligible to the student the remaining part of the book. These chapters occupy some 120 pages; they are well written, accurate, and clear, and they contain all the information which the ordinary student requires. A full optical account of the microscope is by no means out of place as a preface to the examination of living bacteria. Everyone who has had any experience in teaching bacteriology knows what marvellous misuse is often made of an oil immersion lens by the beginner. The preparation of gelatin and potato media is next described, together with the methods of cultivating bacteria thereon. The student is then introduced to some 20 characteristic non-pathogenic organisms *seriatim*; a concise account of each is given and the opposite page is left blank for notes and drawings. The preparation of bouillon, agar-agar, milk, and other culture media follows next in order, with a description of incubators and other accessories. The relation of bacteria to disease is then shortly discussed, together with methods of inoculation and of post-mortem examination of infected animals; to this is added a full account of laboratory work with animals dead from anthrax. Pathogenic bacteria are described in a curious order, the anaerobes taking precedence of the aerobes. The methods of anaerobic cultivation are given and in this place the staining of flagella is described, Löffler's method being alone given, though in our opinion better ones have since been introduced. 31 pathogenic bacteria are described in detail—most of them on a single page, with a blank page opposite, as in the case of the non-pathogenic forms. But to some of the more important species, such as the tubercle bacillus, more space is allotted. 14 species of yeasts, moulds, and streptothrices are similarly described. The last three chapters deal with the bacteriological examination of water, soil, and air, and with a number of special methods of work, such as the preparation of toxins and antitoxins, the agglutination of bacteria by serum, the testing of disinfectants, and other advanced subjects.

We have described the method and scope of Professor Novy's book in some detail because in all respects it appears to us to embody a most logically devised scheme of instruction in bacteriology, and one that may well be taken as a model in framing an extended course in the subject for students. The work is well printed and the diagrams of apparatus are clear and good. No illustrations of the different species of organisms are given because the student is expected to learn their appearances from actual specimens and with this no fault can be found. We can most heartily recommend the book to all teachers of bacteriology.

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*Handbuch der Gynäkologie.* (*Handbook of Gynæcology.*) Edited by Professor VEIT. Third Volume, Second Half, Second Part. With 63 Illustrations in the Text and Three Plates. Wiesbaden: T. F. Bergmann. 8vo. Pp. 486. 1899. Price 18 marks.

THIS part forms the concluding volume of Professor Veit's Handbook of Gynæcology. The subjects considered include Pelvic Hæmatocele, Diseases of the Tubes, General Peritonitis, and Sarcoma of the Uterus. The article upon Pelvic Hæmatocele is written by Professor Winternitz. In accordance with recent views extra-uterine gestation is considered as the commonest cause of this condition. Numerous other causes are, however, enumerated, and such evidence as exists is quoted in favour of the possibility of an intra-peritoneal collection of blood being due to menstruation, diseases of the tubes, varicose veins of the broad ligaments, and new growths. Säuger's division of hæmatoceles into solitary and diffuse is adopted. The symptoms, general and local, are well and fully described, and the frequency of a tubal abortion or tubal mole as the cause rather than a rupture of the gravid tube is pointed out. The length of time required for absorption of the blood renders it impossible to recommend expectant treatment except in cases where the necessary rest in bed can be obtained, and for this reason expectant treatment amongst the poor and those who have to earn their living is seldom admissible. The author recommends laparotomy in the majority of instances and condemns exploratory puncture. In only a small minority of cases is posterior colpotomy an advisable operation—for instance, where a large hæmatocele is present not due to a tubal abortion, where the patient's general condition contra-indicates laparotomy, or where the hæmatocele is suppurating.

Diseases of the Tubes are described by the editor and Dr. Kleinhans. The latter is responsible for the section upon the etiology and pathological anatomy. A very complete account is given of the congenital and acquired deformities and anomalies of the tubes. The section on the pathological anatomy is illustrated by a number of good drawings, taken chiefly from the author's own preparations. The distinctions between the two main varieties of pyosalpinx, the gonorrhœal and puerperal, are clearly differentiated. The view that a hydrosalpinx can be the ultimate stage of a pyosalpinx is regarded as not proved. Tuberculous disease of the tubes is fully considered and the author thinks that an important part is played by gonorrhœa in both its acute and chronic stages in preparing the way for the tubercle bacillus. Previous inflammatory conditions are also held to be of etiological importance in cases of carcinoma of the tubes.

Professor Veit discusses the Symptoms, Diagnosis, Prognosis, and Treatment of Diseases of the Tubes. The complex group of symptoms met with in the various stages of tubal diseases are clearly presented and a striking clinical picture is drawn of the varying conditions of the patient. A timely warning is given against the too frequent employment of exploratory laparotomy, and stress is laid upon the examination of doubtful cases by means of a posterior colpotomy.

The relative value of the vaginal and abdominal routes in operating is very fully gone into, the author coming to the only possible conclusion—viz., that all cases cannot be treated in any hard and fast manner but each case must be considered separately. Under certain circumstances vaginal operations are no doubt the best, but any attempt to deal with every case in such a way would be very likely to lead to disaster.

In considering general peritonitis Professor Döderlein distinguishes an infectious variety, including septic, putrid, gonorrhœal, and tuberculous, and a non-infectious, including mechanical and chemico toxic. In cases of puerperal septic peritonitis the organisms most commonly found are the streptococcus, staphylococcus, pneumococcus, and the colon bacillus. Operative treatment in cases of perforative peritonitis must be carried out very early if it is to do any good. Septic peritonitis due to the streptococcus is almost uniformly fatal.

The two articles upon Sarcoma and Endothelioma of the Uterus are from the pen of Professor Gessner. He calculates that sarcoma of the uterus occurs in the proportion of about one case to every 40 cases of carcinoma. When the disease starts in the mucous membrane of the body of the uterus the periods of life at which it most commonly occurs

are puberty and the years just before and after the menopause. Sarcoma of the wall of the uterus occurs at the same time but rather less frequently at the age of puberty. A very full and careful account is given of the pathological anatomy of the three main varieties of sarcoma of the uterus—viz., sarcoma of the mucous membrane, of the wall of the uterus, and of the cervix. All the recorded cases of the latter kind are collected in a table. The importance of the microscope in the diagnosis of sarcomatous changes in the mucous membrane is indicated and a number of clinical rules are laid down as a guide to the recognition of sarcomatous changes in a myoma of the uterus.

Professor Gessner gives a full analysis of the six cases of Endothelioma of the Uterus which have been recorded up to the present time. The vexed question of the relation of these growths to carcinomata or sarcomata he is content to leave for the present undecided.

Subject and name indices complete the volume. The paper and printing are good and the illustrations are well reproduced. A very complete bibliography precedes each article. The editor and his collaborators are to be congratulated upon the success of their labours. A high standard of excellence has been maintained throughout the work. The book is one of the best of its kind and furnishes a very complete account of the present views of German gynæcologists.

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*Text-book of the Embryology of Invertebrates.* By Dr. E. KORSCHELT and Dr. K. HEIDER. Translated from the German by MATILDA BERNARD. Revised and edited, with additional notes, by MARTIN F. WOODWARD. London: Swan Sonnenschein and Co., Limited. 1899. Vol. ii., pp. xv., 375; Vol. iii., pp. xii., 441. Price: Vol. ii., 12*s.*; Vol. iii., 14*s.*

THE translation and publication of Volumes II. and III. of this excellent German work are at last *un fait accompli* and their appearance will give much satisfaction to zoologists, both teachers and students. Volume II. treats of the Phoronidea, Bryozoa, Ectoprocta, Brachiopoda, Entoprocta, Crustacea, and the Palæostraca; while, on the other hand, Volume III. enters into the consideration of the development of the Arachnida, Pentastomidæ, Pantopoda, Tardigrada, Onychophora, Myriopoda, and finally the Insecta, which group is somewhat more fully considered than the others contained in this volume.

Investigation at the present time is so active that there is a possibility of a translated work becoming slightly out of date, this being due, of course, to the time absorbed by the rendering and the delays which are unavoidable in the publication; this is more especially the case when the work concerned is of some size. In the work under consideration, however, this danger has been guarded against, the more important results which have been obtained from recent investigation having been added in the convenient form of footnotes, so that the work is up-to-date as far as possible. The value of this work is enhanced by the addition of lists of literature at the end of each chapter, which lists, in some cases, are of quite a considerable length; for instance, in the literature dealing with the Insecta more than 210 references are given. Here again the work has been kept up-to-date as far as possible by the addition of references to the more important recent literature under the form of appendices at the end of each chapter. The translation has been extremely well done; we could wish that all translated scientific works were so eminently readable.

The get-up of these two volumes leaves very little indeed, if anything, to be desired; the type is clear, the paper is good, and the books are of a convenient size. The text is fully illustrated, there being over 360 figures, which on the whole are extremely clear, in the two volumes.

Although there may be a certain amount of matter which is beyond the depth of the more general biologist, still without doubt he will be able to find much to occupy his attention. To pick out a few examples of more general interest, the survey of the Arachnidan eyes and the metamorphosis of insects may be mentioned. Then, again, there is a very interesting account of Parthenogenesis, while those interested in problems of a bionomical character will find a brief account of the migration of different generations of the Aphidæ and Chermetidæ from one plant to another. For example, in the case of the former "a winged parthenogenetic generation frequently appears and then may migrate to a different plant, there to reproduce itself, and in a later generation returns to the original host."

After what has been said it is hardly necessary to add that we can highly recommend this work to all who are interested in this branch of zoology.

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*Atlas und Grundriss der Bakteriologie, und Lehrbuch der Speziellen Bakteriologischen Diagnostik.* Von Professor K. B. LEHMANN und Dr. R. O. NEUMANN. Zweite vermehrte und verbesserte Auflage. (*Atlas and Essentials of Bacteriology, and Manual of Special Bacteriological Diagnosis.* By Professor K. B. LEHMANN and Dr. R. O. NEUMANN. Second enlarged and improved edition.) Munich: J. F. Lehmann. 1899. Pp. xv., 495. Plates, 69. Price 16 marks.

THE first German edition of this useful work appeared rather more than three years ago. In November, 1897, we had occasion to review an abridged English translation in one volume. We then expressed the opinion that while the plates of the atlas were very unequal in their excellence, many were good, and that the textual part of the work was on the whole admirable and likely to be of greater utility than the atlas itself. A second German edition has now been called for, from which we judge that the work has met with appreciation. The new edition is increased in size, new plates have been added, and others superseded by better ones. The text has been revised, enlarged, and brought up to date in a highly praiseworthy manner, and we are constrained to repeat our former criticism that it is of greater value than the plates. The latter are doubtless useful so far as such representations can go, and we do not doubt that it would be impossible to produce, on a cheap commercial scale, more accurate coloured figures of cultural appearances which often essentially elude depiction. But of the text we can speak in much warmer praise. In its present form it is a mine of valuable information. It is highly condensed and hardly suitable for the beginner, but it is written by those who are masters of their subject and who have taken infinite pains to include in the work all that is essential to its right understanding. It is divided into two parts, General and Special Bacteriology. The part dealing with General Bacteriology is by Professor Lehmann and was alone included in the abridged English edition and this formed its most serious defect, since no detailed description was at hand to supplement the plates. In this edition the general part has been improved in many ways; in particular the chapter on Susceptibility and Immunity has been so enlarged and rewritten as to be a most valuable summary of our knowledge on the subject. The writer's views on specificity amongst bacteria are likewise to be commended. He admits the impossibility of absolute specific distinctions in many cases and groups the bacteria around the type-form (as "Haupt-art" and "Neben-arten") in a very luminous manner. The larger part of the text is devoted to Special Bacteriology; it is the joint production of the two authors and contains a sufficiently full account of all the important species hitherto described, with tabular schemes for their differentiation which should prove of great utility. We regret to note that in the copy supplied to us the disposition of the type on the page is at times so

careless that the top lines are almost lost, while an excessive margin is evident below. But the text is legibly printed and misprints are practically absent.

## LIBRARY TABLE.

*Manual of Bacteriology.* By ROBERT MUIR, M.A., M.D. Edin., Professor of Pathology in the University of Glasgow, and JAMES RITCHIE, M.A., M.D. Edin., Lecturer in Pathology in the University of Oxford. Second edition. Edinburgh and London: Young J. Pentland. 1899. Pp. xviii., 564.—It is more than two years since we reviewed the first edition of this work and we were then able to speak of it in very favourable terms. The appearance of a second edition affords us the opportunity not only of repeating our former verdict but of emphasising it. We have no hesitation in asserting that this book deserves to rank amongst the very foremost of the smaller text-books on bacteriology, and we know no work of the kind which we can more strongly recommend to the student or the practitioner. It is most ably and lucidly written, it is thoroughly accurate and reliable, and it is fully abreast of the times. The present edition, unchanged in its general scope and plan, is enlarged and improved in many ways. Amongst the many alterations the following may be noted. The section dealing with bacterial toxins has been enlarged and in part re-written, as has the chapter on immunity and antitoxins. The same is the case with the pages devoted to agglutination of the bacillus typhosus and other bacilli. Paragraphs have been added on the standardization of the reaction of media, on bacterial fermentation of sugar and on indol formation, on the permanent preservation of cultures, and on vaccination against typhoid fever and bubonic plague. Malta fever, yellow fever, and other diseases now receive due consideration, as do also the diplococcus intracellularis meningitidis, the smegma bacillus, and Gärtner's bacillus enteritidis. Many excellent new micro-photographs have been added. The work is, in fact, admirably illustrated. It is, indeed, difficult for the reviewer to fix on any noticeable defect in the book. We think, however, that the bacteriological examination of water might receive more extended notice and we regret the absence of any detailed information on the all-important subjects of disinfection and antiseptics. We would also call attention to a singular slip in mathematics on p. 5, where it is stated that, assuming a bacterium to reach maturity and divide in half an hour, a simple calculation will show that at the end of 24 hours from one individual 17,000,000 will be produced. Two to the power of 48 is, on our computation, 281,474,976,710,656.

*Chemical and Microscopical Aids to Clinical Diagnosis: being a Guide to Urinary, Gastric, and other Analyses Employed in Practical Medicine.* By CARSTAIRS C. DOUGLAS, M.D., B.Sc. Edin. Glasgow: James Maclehose and Sons. 1899. Pp. xii., 258.—There is plenty of room for a little manual of this kind when it is clear, accurate, and well written, as in the present case. Methods of clinical diagnosis are becoming so numerous and important that they now form a very essential part of the student's curriculum, and this volume is small enough, yet sufficiently detailed, to satisfy modern teaching requirements. Dr. Douglas has brought together into a small compass all those methods of research which have proved of value in clinical diagnosis, including many of quite recent introduction, and he has taken pains to explain them. More than half the book is concerned with a consideration of the urine. Nor is this an undue proportion when we consider the large amount of work which has been devoted to its study. The other tissues and fluids of the body are, however, by no means neglected, and the book as a whole is well proportioned. Illustrations are introduced where necessary and they are clear and good. If we point out one or two errors or omissions it must in no way be taken to imply an unfavourable estimate of the work. There are a few obvious misprints—e.g., "coma" bacillus on p. 226, while on p. 182 the diameter of actinomyces threads is given as 5 $\mu$. The writer, too, is amongst those who continue to regard the Finkler-Prior vibrio as the cause of cholera nostras. The directions for performing the serum test for typhoid fever are too short and incomplete, nor is the dilution of the serum recommended (1 in 10) sufficient to exclude fallacies. It is fair, however, to state that no pretence is made to include in the work a complete account of bacteriological diagnosis. In describing the preparation of blood films for staining purposes no mention is made of fixation by osmic acid vapour and we do not agree with the statements quoted on p. 206 that the nuclei of polymorphonuclear leucocytes take up acid dyes and that eosinophiles are "old cells." The "neutrophile" granules of Ehrlich are now known to be oxyphile. Starch, especially maize-starch, might have been mentioned amongst the misleading foreign bodies commonly found in urine. The distinction implied on p. 102 between hepatogenous and hæmatogenous jaundice does not commend itself to the modern pathologist. These and other minor defects can be remedied without difficulty. The book as a whole is singularly free from inaccuracies and can be recommended as a most useful, practical work to students and practitioners.

*Dictionnaire des Termes de Médecine (Français-Anglais).* By H. DE MÉRIC, M.R.C.S. Eng. London: Baillière, Tindall, and Cox. 1899. Demy 8vo, pp. 244. Price 4*s.* nett.—This is the French-English part of a dictionary of which the English-French portion has been separately and previously published, and was the more satisfactory of the two. In his preface the author remarks that he has been reproached for having inserted into the English-French portion of his dictionary words which had no place in such a work. We must candidly say that we think this, the second part of his dictionary, is open to the same objection. A dictionary of medical terms must necessarily include some words which are not always used in a medical sense; but we think the author has been a little lax in a number of the words which he has allowed to creep in. There is also much needless repetition of stem-words with adjectival and other terminations. On the other hand, the dictionary is wanting in many instances as regards symptoms, conditions, diseases even, and apparatus, frequently alluded to in French medical practice and literature, and in special terms to which reference might advantageously have been made. At the same time, the author deserves the thanks of medical men for his labour: so far as we know, there is no other French-English medical dictionary in the market, and, although the present work could be greatly improved, it will serve as a solid foundation for a fuller work in an edition to come.

## JOURNALS AND REVIEWS.

*Janus: Archives Internationales pour l'Histoire de la Médecine et la Géographie Médicale.* Rédacteur-en-chef: Dr. H. A. PEYPERS, Amsterdam. Quatrième année, dixième livraison, 15 Octobre–15 Novembre, 1899. Onzième livraison, 15 Novembre–15 Decembre, 1899. London: Williams and Norgate.—These two parts of a valuable international journal—published in Amsterdam, Jena, Paris, and London—contain much instructive matter. Amongst the serial articles is a reproduction of John Locke's "Observationes Medicæ," serving to remind us of that philosophical physician and friend of Sydenham, one of the cases of measles recorded being that of the latter's son, "W. Sydenham, puer, 11 annorum." There are learned studies of Leprosy in Denmark in the Middle Ages by Dr. Ehlers of Copenhagen, and of the Pharmacopœia in the Seventeenth Century

by Dr. Landau of Nuremberg; but the English reader will perhaps be more attracted by the account given by Dr. Henderson of Columbia, Ohio, of "The Earliest Contribution to Medical Literature in the United States," the said contribution being a leaflet by one Thomas Thacker, issued at Boston at the close of 1677. It is entitled, "Guide in the Small-pox and Measles," and consists, says Dr. Henderson, of "a compendious English translation of a portion of the writings of Sydenham," its publication being doubtless evoked by the prevalence of small-pox in Boston at this period. In the latest number of the journal is the opening of an article upon Tuberculosis and Climate, by Dr. Gros, which is of value as showing the prevalence of this disease amongst the natives of Algeria. The same number contains a portrait and brief memoir of the late Dr. Theodor Puschmann who died recently at Vienna in his fifty-sixth year.

*Revue de Gynécologie et Chirurgie Abdominale.* Vol. III., No. 6. November-December, 1899. Paris: Masson et Cie.—This number contains an interesting article upon Penetrating Wounds of the Gravid Uterus, by Professor Estor and Professor Puech, the conclusion of his paper upon the Diagnosis and Treatment of Solid Tumours of the Ovary, by M. L. Dartigues, the Treatment of Tuberculous Peritonitis by Laparotomy, by Professor J. Galvani, and the usual analyses of current literature. A bibliographical index and a name and subject index for the volume conclude the number.

*Annales de Gynécologie et d'Obstétrique.* Vol. LII. November, 1899. Paris: G. Steinheil.—This journal contains the following original articles: On Congenital Cystic Degeneration of Glandular Organs and especially of the Liver and Kidneys, by M. A. Couvelaire, the Rôle of the Toxin of the Gonococcus in the Gonorrhœal Affections of the Internal Genital Organs of the Female, by Dr. V. Maslovski, and an Anencephalic Fœtus with Spinal and Facial Fissures, by Dr. A. Carache. The usual bibliography concludes the number.

# Analytical Records
FROM
# THE LANCET LABORATORY.

### DIABETIC MARMALADE.
(CALLARD AND CO., 65, REGENT-STREET, LONDON, W.)

ANY addition which is calculated to relieve the tedium of diabetic diet will be welcomed and we regard diabetic marmalade as an important introduction of this kind. It is an attractive-looking preparation with a pleasant orange flavour though it is somewhat sweet to the taste. Our analysis showed that this sweetness was not due to sugar—indeed, we are able to state that the preparation is free from sugar. On the other hand, glycerine was detected but there was no saccharin. Further examination showed that the consistence of the preparation was due in part to gelatin. The marmalade contains finely cut slices of orange rind. It affords a good adjunct to the diabetic dietary.

### GEROLSTEIN NATURAL MINERAL WATER.
(THE GEROLSTEIN NATURAL MINERAL WATER CO., 43, KING WILLIAM-STREET, LONDON, E.C.)

The Gerolstein spring was discovered under somewhat peculiar circumstances, chiefly owing to the effects of escaping carbonic acid gas. The spring is situated in the mountainous districts of the river Kyll which flows to the Moselle. According to our analysis the composition of the water is as follows:—Total mineral constituents, 3·33 grammes per litre, which may be divided as follows: carbonate of lime, 1·01 gramme per litre; carbonate of soda, 0·40 gramme; common salt, 1·52 gramme; and sulphates of the alkaline earths, 0·40 gramme. The water is very pure, containing not a trace of organic matter. It is impregnated with the natural carbonic acid gas of the spring. We have before pointed out the distinct advantages of employing sparkling water which in no single respect contains an artificially added ingredient. The mineral salts are present in agreeable proportion and the antacid properties of the water may be referred to the carbonate of soda and to the carbonate of lime dissolved in carbonic acid. Probably calcium carbonate dissolved in carbonic acid gas is just as efficient as a neutraliser of acidity as carbonate of soda, with the further advantage that it is distinctly diuretic. The water is well suited for blending. It possesses a soft taste characteristic of naturally occurring ingredients. It retains its sparkling property in a very satisfactory way and for a considerably longer period than do waters artificially charged.

### BYNOGLYCEROPHOSPHATES.
(ALLEN AND HANBURYS, LIMITED, PLOUGH-COURT, LOMBARD-STREET, LONDON, E.C.)

The glycerophosphates are of well-known value in debilitated conditions and their combination with active liquid malt adds very much to their value in being associated with an enzyme which so materially aids in the digestion of farinaceous foods. We found that the presence of glycerophosphates in no way retards the digestive action of the malt diastase. Even in the cold, starch jelly quickly became a limpid liquid after the addition of a few drops of bynoglycerophosphates. The preparation is quite agreeable to take and has a pleasant aromatic flavour suggestive of peach kernels. Its therapeutic value under certain circumstances, as in wasting diseases, will be readily conceded.

### SAARBURG MOSELLE.
(SAARBURG MOSELLE EXPORT CO., LIMITED, 2, BURY-STREET, ST. JAMES'S, LONDON, S.W.)

We have paid some attention to the specimens of this wine submitted for examination because it is said to be specially suited for gouty and diabetic patients. How far this is so may in some measure be seen from our analyses which were as follows. 1893 Moselle: extractives, 2·21 per cent.; mineral matter, 0·16 per cent.; alcohol, by weight 8·64 per cent., by volume 10·73 per cent., equal to proof spirit 18·81 per cent.; tartaric acid, 0·54 per cent.; acetic acid, 0·12 per cent.; and sugar, 0·24 per cent. 1895 Moselle: extractives, 1·91 per cent.; mineral matter, 0·15 per cent.; alcohol, by weight 9·36 per cent., by volume 11·61 per cent., equal to proof spirit 20·35 per cent.; tartaric acid, 0·55 per cent.; acetic acid, 0·10 per cent.; and sugar, 0·17 per cent. 1897 Moselle: extractives, 1·96 per cent.; mineral matter, 0·18 per cent.; alcohol, by weight 9·36 per cent., by volume 11·61 per cent., equal to proof spirit 20·35 per cent.; tartaric acid, 0·64 per cent.; acetic acid, 0·096 per cent.; and sugar, 0·19 per cent. From these results it will be seen that these wines contain hardly any sugar, yet the alcoholic strength is low. They belong to the class of light wines suitable particularly for moderate use in diabetes or where there is a gouty tendency. They are delicate in character, without added spirit, non-saccharine, and practically non-acid. All the wines were in excellent condition with pleasant flavour and "dry." When a light stimulant is desirable in conditions where alcohol, sugar, and acidity are to be avoided as much as possible these wines would seem to serve suitably for the purpose. They are, at any rate, free from the drawbacks of heavy wines loaded with sugar and containing a high percentage of spirit. Although these wines contain the normal acids of the grape yet they yield an ash which is markedly alkaline. Thus their effect upon the blood would be to increase its alkalinity. Saarburg Moselle affords an excellent beverage

blended with aerated water but especially with a natural mineral water. The same wine might be supplied with advantage in sparkling form.

### UROTROPINE (SCHERING).

(A. AND M. ZIMMERMANN, 9 AND 10, ST. MARY-AT-HILL, LONDON, E.C.)

Urotropine has received some prominence of late as a useful diuretic and solvent of uric acid concretions. It appears to be a compound produced by the action of formaldehyde on ammonia and is known shortly as formin. Its chemical name is hexa-methylene-tetramine. Urotropine occurs in colourless granular crystals exhibiting an alkaline reaction. It is soluble in water but sparingly in alcohol. It is stated that urotropine increases the excretion of the urine and of uric acid, the solution of the urates beginning within 24 hours of the administration of the drug. It is said also to serve as a urinary antiseptic and to be effective in many forms of cystitis. The dose is from five to 15 grains.

### "FINO PURO" SHERRY (GONZALEZ BYASS).

(HATCH, MANSFIELD, AND CO., 1, COCKSPUR-STREET, TRAFALGAR-SQUARE, LONDON, S.W.)

There are features in the results of the analysis of this sherry which imply that it is excellently adapted for dietetic purposes. Thus, it is practically non-acid in character, contains a minimum of sugar, and is of comparatively low alcoholic strength. The actual analysis was as follows: alcohol, by weight 13·92 per cent., by volume 17·17 per cent., equal to proof spirit 30·09 per cent.; extractives, 2·62 per cent.; mineral matter, 0·60 per cent.; sugar, 0·83 per cent.; tartaric acid, 0·43 per cent.; and acetic acid, 0·03 per cent. It is a light delicate wine and of a pale colour, belonging to that class of sherry known as Amontillado fino. It is a "brut" wine. It possesses excellent bouquet and flavour and is perfectly free from the heavy character of loaded wines. Indeed, its composition shows it to be of the lightest character amongst sherries. It is an agreeably stimulating wine, sound, and possessing the qualities of a pure natural sherry.

### MISTURA FERRI SALINA (SELLERS).

(J. SELLERS, 11, CLERKENWELL-GREEN, E.C.)

The convenience of this preparation is obvious. It is of a strength which by definite dilution yields a solution containing suitable administrative quantities of the various drugs which it contains. These drugs are ferri sulph., liq. arsenicalis, tinct. nucis vomicæ, and the alkaloids of cinchona bark. Our analysis has confirmed the presence of each and all of these medicaments. The mixture also contains the sulphates of soda and magnesia. The strength is such that one ounce diluted to eight ounces forms a suitable mixture for administration in doses of one ounce. We found the iron to be present intact in unoxidised condition. This formula is admittedly an excellent one in ministering to blood impoverishment, as in anæmia and chlorosis.

### FINE OLD BRANDY (SPANISH).

(J. WILSON AND VALDESPINO, 79, MARK-LANE, LONDON, E.C.)

More than once we have drawn attention to the fact that excellent brandy—that is, a genuine wine spirit—is imported into this country from Spain, the colonies, and elsewhere. It is notorious that since the unfortunate devastation of the French vineyards by the phylloxera scourge spirit described as genuine cognac has been imported into this country in increasing quantity. According to official returns it was not possible that this spirit could have been obtained during the distillation of wine, and evidence was given in favour of the spirit being derived from grain or other material. As we have pointed out some differentiation may be made by determining the amount of volatile ethers. Malt or grain spirit does not contain a trace of these interesting bodies since they are derived by the interaction of fruit acids during the process of fermentation upon the alcohol. The specimen under criticism, which comes from Spain, gives abundant evidence, assuming the presence of these ethers to be a criterion, of being a genuine wine-derived spirit. Our analysis gave the following results: extractives, 0·37 per cent.; mineral matter, 0·01 per cent.; alcohol, by weight 47·82 per cent., by volume 55·60 per cent., equal to proof spirit 97·44 per cent.; acidity reckoned as acetic acid, 0·06 per cent.; and alcohol in volatile ethers, 0·03 per cent. The spirit was characterised by a pleasant fragrance in regard to both taste and smell. According to these results we have little doubt that it is a genuine wine-derived spirit matured by storage and therefore well adapted for medicinal use. It is important that for clinical use care should be taken that only a spirit derived from wine and afterwards matured should be employed, because genuine brandy possesses restorative properties which cannot be referred to alcohol alone.

### CITROPHEN.

(FASSETT AND JOHNSON, 31 AND 32, SNOW-HILL, LONDON, E.C.)

Citrophen is a compound of citric acid with phenetidin. As is well known phenacetin (para-acet-phenetidin) has been used as an antipyretic and analgesic, but not always without after-effects of an objectionable kind, simulating the action of a poison and with the production sometimes of a rash. It is stated that when combined with citric acid, as in citrophen, all objectionable sequelæ are avoided while the analgesic and antipyretic properties are preserved. Testimony has been published of the value of citrophen in influenza, migraine, and other conditions where pyrexia is a feature. Citrophen is a white powder possessing a slightly acidulous taste and it possesses the advantage of being soluble in water. It is said to consist of one part of phenetidin with one part of citric acid in true molecular proportion. It is, of course, conceivable that the introduction of a complex organic molecule such as citric acid would sensibly modify the action of a quinine substitute like phenacetin, much as the naturally occurring morphine compounds differ in their action from the artificially prepared chlorides or sulphates.

### CASCARA CHOCOLETTES.

(WRIGHT, LAYMAN, AND UMNEY, 48 AND 50, SOUTHWARK-STREET, LONDON, S.E.)

The feature of these preparations is mainly one of device, while the extract of cascara contained in the "chocolette" consists of the pure aperient principles of the bark. The tablets are chocolate-coated, attractive in appearance, and may be taken without any marked or objectionable taste of the drug asserting itself. The tablets are easily soluble in water at ordinary temperatures and they are very convenient for administration and satisfactory in effect.

### MALTZYME.

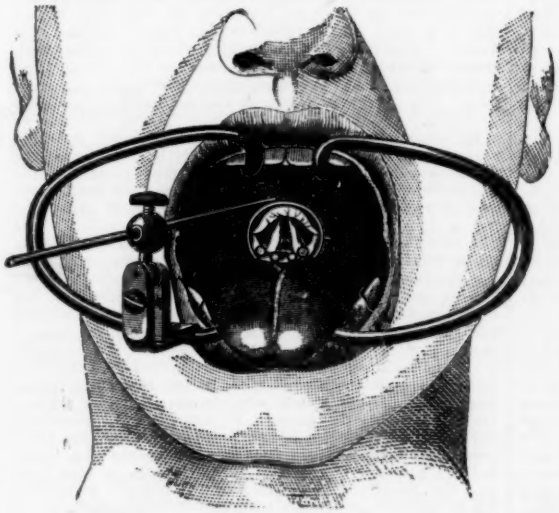
(THE MALT DIASTASE COMPANY, NEW YORK; AND 19, CROSS-STREET, HATTON-GARDEN, LONDON, E.C.)

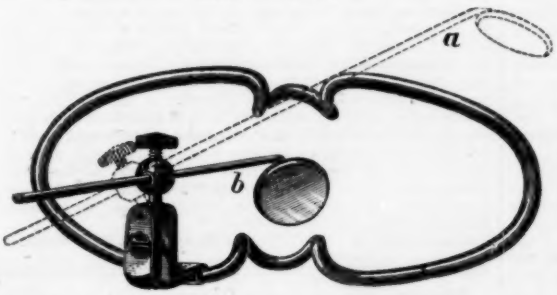
Maltzyme is evidently prepared with due regard to the preservation not only of the digestive principle of the malt but of the important nourishing constituents of the grain also. It is exceedingly active on starch jelly, rapidly converting it, even in the cold, into soluble starch and finally dextrin and maltose. At the body temperature its action is still more rapid. One important advantage of maltzyme is its thin consistence, so that the requisite dose may be readily poured out of the bottle. It possesses a fine malty flavour with no unpleasant after-taste. We have examined also maltzyme with cod-liver oil, a combination which, in view of the activity of the diastase, is a valuable therapeutical agent, especially in wasting diseases.

# New Inventions.

## A NEW LARYNGOSCOPE.

THE instrument here shown, which has been already mentioned in our Budapest correspondence,[1] was devised by Dr. Mark Paunz. The advantage claimed over similar instruments is that being fixed it allows plenty of space for the instruments of the surgeon so that he can use both hands in performing intra-laryngeal operations. Dr. Paunz has also recently devised a similar instrument for retro-nasal operations. The illustrations show the instrument in position and two positions (*a* and *b*) which can be given to the mirror.






## A SIMPLE APPARATUS FOR ADMINISTERING THE INTRA-GASTRIC NEEDLE-DOUCHE.

BY the intra-gastric needle-douche is meant the application to the interior of the stomach of very fine jets of water which impinge upon its walls with considerable force. By the use of hot and cold water in alternation a tonic effect is produced upon the gastric musculature which has proved of the greatest service in the treatment of atony and allied conditions. Moreover, it has been found in practice that adherent mucus is removed by the needle-douche with greater facility than by ordinary lavage. The inception of this valuable mode of treatment must be credited to Professor Turck of Chicago, who communicated it to the profession in a paper which he read before the Section of Medicine at the annual meeting of the American Medical Association held at

[1] THE LANCET, Oct. 28th, 1899, p. 1200.

FIG. 1.

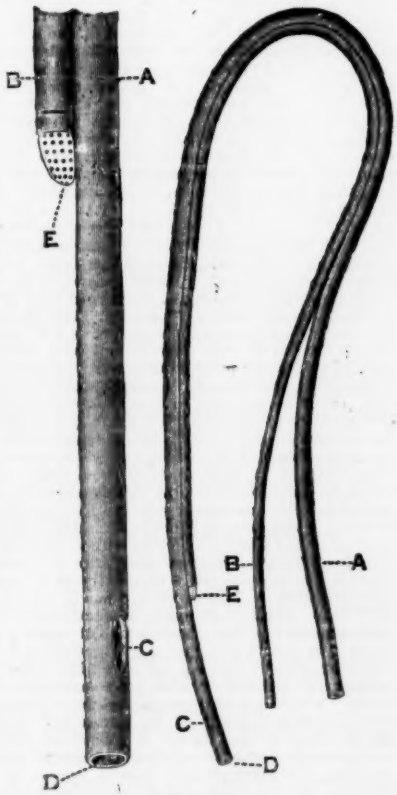
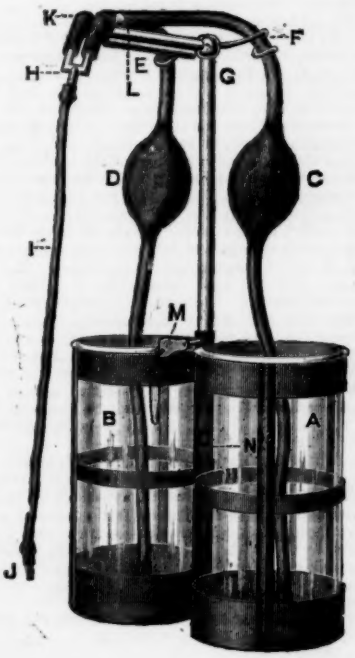



FIG. 2.



Baltimore in 1895. His description runs as follows:—"For cleansing the stomach I use an apparatus which consists of a double tube—a short tube with a perforated ball at the end to be introduced into the stomach and a longer tube for the immediate return of the water introduced. The water is forced through the short tube under pressure and returned through the larger tube. ..... Not only does this apparatus cleanse the stomach, but it acts as a needle-douche, and as such is a vaso-motor stimulant."[1] Professor Turck's double stomach-tube (Fig. 1) consists of an efferent tube, A (shown at the left hand side of the illustration in its natural size) which is provided with a terminal eye, D, and one at the side, C. The afferent tube, B, is of smaller size and is cemented to A for the greater part of its length. It terminates in a conical perforated bulb shown at E. This bulb is of metal, and is provided with a shoulder which enters the end of the rubber-tube, to which it is further made fast by a silk thread shown in the sketch as a black line. The tube, E, is so arranged that it terminates about four inches from the end of A. The afferent tube, B, is connected by a suitable mount with the apparatus containing the water under pressure and the efferent tube, A, with an exhausting arrangement to be presently described. (I would here mention that I wish it to be distinctly understood that I do not claim to have made any improvement in Turck's double tube, which is practically perfect, but I figure it here for the sake of those of my readers to whom it may not be familiar.) Unfortunately it has to be procured either from Tiemann of New York or from Truax and Greene, Wabash-avenue, Chicago, as in this country we are so far behind America and Germany in the intra-gastric treatment of stomach affections, that it has not hitherto been worth any manufacturer's while to lay down the plant for making it. Professor Turck's original apparatus for forcing water through this tube consisted essentially of a couple of large glass wash-bottles, into which air was forced by means of a hand bulb. Whilst admirably adapted for use in the consulting room, the chief disadvantage of Turck's apparatus is its want of portability, and as in most cases it is essential that the needle-douche should be applied before breakfast, an apparatus is required which can be carried to the patient's house. I claim for my apparatus, which was exhibited in the section of Pharmacology at the Portsmouth meeting of the British Medical Association in 1899, that it is extremely compact and portable, that it is cheap, and that it can, on occasion, be extemporised from a couple of Higginson syringes, and that it is quite as efficacious as the more complicated apparatus in giving a needle-douche of sufficient force when used with a Turck's tube.

My apparatus for administering the intra-gastric needle-douche (Fig. 2) consists of a metal stand holding two glass cylinders, A and B. In each of these is placed a Higginson's syringe, C and D, the afferent tubes of which passing through specially designed spiral supports, E and F, upon the handle, G, are attached respectively to the limbs of the Y-piece H. From the third limb of this Y-piece proceeds a rubber tube, I, which terminates in a conical nozzle, J, of such a size as to enter the end of the smaller stomach-tube—that carrying the perforated ball. The handle, G, is attached to the upper end of a telescopic rod which, for portability, is made to shut down into the apparatus, and when in use is maintained at the proper height to keep the tubes of the Higginson's syringes straight or extended by means of a split pin, M, which enters a hole in the stand. The handle, G, is further provided with metal clips at K and L to hold the tubes in position. The nozzle, J, is corrugated in order that it may not slip out of the rubber stomach-tube, and the afferent tubes of the Higginson syringes are best provided with suction discs by means of which they may be fixed to the bottoms of the glass cylinders. Either the glass cylinders themselves or the central rod of the stand is graduated in ounces in order that an idea can be formed as to the amount of fluid which is being introduced into the stomach of the patient.

I believe that Professor Turck's original idea was that the longer or efferent stomach-tube should be attached to a long rubber-tube which passed to a pail or receptacle upon the floor, and that as soon as a few ounces of water had been introduced into the stomach syphonic action should be established by any of the usual methods. Thus, theoretically, the stomach ought by syphonage to keep itself empty. In practice, however, I have not found this practicable, and I believe that Professor Turck himself uses an exhausting bottle to empty the stomach at intervals whenever it appears to be getting full. In my own practice I use a very simple device which combines the advantages of syphonage with Turck's aspirating bottle. Upon the floor I have standing a large three-necked bottle, each neck being closed with a perforated cork. Through one of these corks passes a long metal tube which reaches nearly to the bottom. The upper end of this tube, which projects above the cork, is attached by a length of rubber-tube to the efferent stomach-tube. Through the second cork passes a short length of tube which carries on its upper extremity an exhausting bulb—that is to say, a rubber bulb which exhausts when it is worked. This is exactly similar to the bulb on a Higginson syringe working backwards. Through the cork in the third neck passes a short tube which carries at its upper extremity a tap. The apparatus works in the manner to be presently described.

In administering an intra-gastric douche hot and cold water are placed in A and B respectively and the apparatus is placed upon a table at a convenient height opposite to the patient, who sits upright in a chair. The double stomach-tube with its efferent tube, connected by a short glass tube and a long rubber one with the bottle which I have just described, lies ready upon the table in front. The exhausting bottle aforesaid is standing under the table. The stomach-tube is then passed and the conical mount J inserted into the smaller tube. If pressure be now made upon the bulbs C and D alternately, hot and cold water respectively will be forced into the stomach of the patient in the form of fine needle-like jets from the perforated bulb at the extremity of the shorter stomach-tube. In practice it is convenient to send in one quarter of one cylinder before proceeding to the other. The patient will thus get eight alternations of hot and cold water during the *séance*. At intervals the stomach is emptied of the water which has passed into it. A few compressions of the exhausting bulb attached to the bottle under the table will so rarefy the air in it that fluid from the stomach will commence to flow into it. As soon as this occurs the tap connected with the tube passing through the third neck may be opened, air will enter the bottle, and the flow will continue by syphonic action alone until the stomach is empty. We thus avoid the possibility of injuring the stomach wall by too strong suction. When it is borne in mind that according to the dynamometer the grasp of the hand is capable of exerting a pressure of about 120lb. it can be easily seen that sufficient force is generated to project jets of quite sufficient intensity to give a very efficient needle-douche in the stomach. In this form of apparatus clips or valves upon the tubes are quite unnecessary, as from the construction of a Higginson syringe backward flow is impossible. The apparatus is manufactured by Messrs. Bailey and Son, 38, Oxford-street, W.

Wimpole-street, W. GEORGE HERSCHELL, M.D. Lond.

[1] See also THE LANCET, Jan. 28th, 1899, p. 219

**SEAMEN'S HOSPITAL FOR CARDIFF.**—At a meeting of the committee of this institution held recently under the presidency of Sir Thomas Morel it was stated that up to the present £21,279 had been received. A piece of land of the value of £250 which adjoined the proposed site of the hospital was presented by the directors of the Taff Vale Railway Company.

**PRESENTATIONS TO MEDICAL MEN.**—On its becoming known that Mr. James Charles Weld, L.R.C.P. & S. Irel., of Hopetown, Victoria, Australia, was about to leave the town and district after a residence there of seven years or practically since the infancy of the town and district, his friends formed a committee with the view of making him a presentation. Subscriptions for this object were freely given, and at a social entertainment held in the Mechanics' Hall on Nov. 18th last Mr. and Mrs. Weld were presented with a marble clock, a silver claret jug, and a purse of sovereigns as tokens of the regard in which they were held by the inhabitants of the whole district from Warracknabeal northward.—At a crowded meeting held at Zion Chapel, Cwmavon, Glamorganshire, on Dec. 16th, 1899, Mr. Richard Thomas Williams, L.R.C.P. & S. Edin., L.F.P.S. Glasg., was presented with an illuminated address and a purse containing £120 as a mark of respect and esteem on the occasion of the termination in his favour of the charge made against him at the last meeting of the General Medical Council.

# THE LANCET.

*LONDON: SATURDAY, JANUARY 6, 1900.*

THE medical life presents now so full and varied a programme that it is impossible when standing on the threshold of a new year either to pass in review in exhaustive manner the events of the year gone by or to forecast what will be the important developments of the year to come. In our *Annus Medicus* we strive each year with the former task; but in our opening words this week we make no effort towards the latter. Our position, however, with our readers, we are proud to think, asks for a few words with regard to THE LANCET in its relations to the medical profession. These relations are of such a character as to call from time to time for an account of our stewardship. It is our aim to make THE LANCET in the fullest sense the organ of professional opinion and the just reflection of professional sentiment, and in our endeavours to this end we incur a double responsibility towards our readers. Not only do we propose to furnish them from week to week with information and news, whether of a scientific or domestic character, that should be interesting to them, but we also record the feelings of the profession upon the various matters which come successively into prominence, while we accept the grave responsibility of suggesting the course that it would be wisest and best for practitioners to take in the many situations of delicacy and difficulty which present themselves in their public or private lives. Of this, one of the most difficult branches of our editorial work, it does not become us to speak much, but we do not hesitate to repeat what we have often said before, that it is the knowledge that we possess the trust of our professional brethren which gives us confidence as well as pleasure in facing the duties of 1900. So long as we receive from the profession the continuous support which has for more than three-quarters of a century been extended to us, so long we shall have warrant for believing that we have not failed to justify our claim to represent the best interests of the medical man.

The readers of our columns will know without having it pointed out to them that the year just passed has witnessed no sensational development of scientific therapeutics. Nothing comparable in its revolutionary effects upon diagnosis or treatment to the discovery of the x-rays or of the antitoxin treatment of diphtheria has been reported, and such advance as has occurred, though very real, has not reached any definite stage at which it would be convenient to say, Here is progress. New territories have been reconnoitred, but it cannot be said that there has been any effective occupation of them. The main efforts of investigators have been directed at increasing our knowledge of preventive medicine rather than at the attempt to discover new curative measures; and in an extended and rapidly extending familiarity with tropical disease we see an excellent example of fruitful work, nearly all of a preventive nature. This is the work which constitutes the chief claim of 1899 to have enriched the medical knowledge of the world. In THE LANCET will be found accounts of the diseases that are rife in the most distant parts of the earth, and all these communications to our pages are instinct with the authors' desire to afford trustworthy information whereon the scientific investigator can sit in judgment and from which he can make deductions. We regard the feeling of the community—quite a new feeling, by the way—that the public health of our colonial possessions is of the first interest to our Imperial position as a proper recognition of the position of medicine and a distinct gain to the profession, while the manner in which medical men have responded to that feeling redounds to their credit. At the present moment in many quarters of the globe investigations are being carried on in the best spirit of scientific zeal. Such work can only lead to substantial results for the good of the world; but it must not be forgotten either by the reader or by the worker that every apparent discovery must be submitted to probationary tests, and that the severer those tests the quicker will be the progress in the right line.

In the social, as distinguished from the scientific, world of medicine there has been activity, and this, which has been very generally manifested, appears to us to have been better directed than on previous occasions. The phrase "Medical Reform" has not been so often used as an elusive title to declamatory articles against the supineness of highly qualified persons or in recommendation of purely Utopian schemes. In many centres of England definite attempts have been made towards obtaining the concurrence of the medical men in the localities with some uniform scheme by which they can resist unfair encroachments upon their time and work, and thus will be enabled to devote their best energies to the welfare of the sick. The organisation of the profession into anything like an effective body for the protection of itself and of those who are its proper charges is yet a long way off, but we see signs in every direction that the efforts which are being made towards this desirable end are sensible and will bear fruit. The investigations of our Special Commissioner have played no inconspicuous part in transforming ill-directed disaffection into a more general movement against recognised grievances. They have supplied those who are determined to fight in constitutional manner for their own hands with dates, details, and figures, so that they are able to demand justice reinforced by incontestable argument instead of relying on rhetorical declamation. We have not finished our part of the task. There are many places where the evils of hospital abuse press hardly, and where the battle of the clubs is still being fought, concerning which we have as yet made no report. But the grievances that have been exposed are no longer denied and the amount of success in combating them that has attended concerted measures here and there is of good omen. The row may be a long one, as the South American proverb would express it, but we ask our readers to help us in hoeing it by giving us all information that will be useful to their colleagues. The General Medical Council is now thoroughly alive to the fact that the medical profession intends that its interests, which after all are the interests of the public, shall be

properly watched, and that measures shall be taken to amend the law in directions where the law has failed. The Direct Representatives of the profession on the Council are pledged to help their constituency to obtain the proper treatment that is implied by adequate protection against encroachment; and although they propose to do this in somewhat different ways each is animated with the desire to do justice to the confidence that has been reposed in him, and none will let slip any opportunity that his office gives him to advance the well-being of the general practitioner.

In any consideration of political possibilities the general outlook of affairs must play a part, and it is our duty to warn those of our readers who have looked confidently forward to "something being done soon" that the South African War will assuredly be a set-back to their expectations. This campaign has now reached a stage at which not the most experienced statesman, the most war-worn general, or the most astute wire-puller, will venture to prophecy much of what is to happen, but whatever the next events the end will not be soon. This means that Imperial Parliament will be fully employed for some time to come in dealing with questions arising out of the war and ranging from the price of condensed milk to the form of a new constitution for South Africa, and thus all domestic legislation will have to take slender chances in approaching sessions. GOD grant that all will come right and without any fearful loss of life, and that when next we address our readers upon the threshold of a New Year the national circumstances may warrant us in wishing them a happiness which cannot at the present juncture be theirs. In the meantime to the medical profession the bright spot in the gloomy sky is the universal and unstinted admiration that the medical branch of the services has won for its effective organisation, and the courage, skill, and resource of its members.

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THE General Medical Council is so much in evidence in connexion with medical education that the use of its disciplinary or penal function is apt to be too little regarded. The number of practitioners whose conduct exposes them to the exercise of this function of the Council in any given year may almost be counted on the fingers of one hand. Only two registered practitioners—one a dentist—were removed from the Registers at the recent meeting, and they were erased on the ground of conviction in a criminal court and not as the result of an investigation into professional conduct by the Council. But the number indirectly affected by the disciplinary action of the Council is large. In the report of its Medical Aids Committee received by the Council a letter was read announcing that the London and Manchester Assurance Company had ceased to take new members into their medical aid department, thus meeting the objections of the Council as expressed in its resolution of June last against the practice of systematic canvassing and advertising for the purpose of procuring patients. The number of medical men under agreements with this company was about 1000. It is important therefore to give separate attention to the disciplinary work of the Council. Evil is often wrought by want of thought, and many of the practitioners who appear before the Council on a charge of irregular or unprofessional practice do so rather from inattention to the published resolutions of the Council than from any intention to go contrary to its wishes. It is remarkable that in spite of the large numbers of medical men associated with companies in which medical aid business has been carried on no actual charge against any individual practitioner has hitherto been brought. This does not show that the resolution of the Council has been ineffective. The action of the London and Manchester Assurance Company shows the contrary to be the case. It is to be inferred that the companies have been moved to such action by their medical officers representing the risk to their interests involved in such a commercial way of getting patients. We need not say that it is far better that the General Medical Council should effect its object by the simple process of a general expression of strong disapproval of a system than by penal action against individual practitioners. It may easily be supposed that the London and Manchester Assurance Company is not the only one whose medical officers are affected by the resolution of the Council in June last. Time will show this. The profession at large will be glad if the effect of the Council's resolution on this subject is to bring about the discontinuance of what looks very like the carrying on of a sort of medical practice by commercial companies on commercial methods and principles.

The cases which were brought before the Council at its late meeting for its judicial consideration illustrate one or two points in reference, first, to the profession and, secondly, to the Council's own power, of which we ought to take note. A most glaring defect in the Council's power was made painfully manifest. For some time the Council has been accustomed to remove from the Register the names and qualifications of practitioners who were proved to have employed unqualified assistants and allowed them to attend grave cases as if they were registered practitioners. The scale upon which this practice obtained before the Council began to regard it seriously with a view to its being declared an offence involving erasure was very large. In some instances the offence is committed on a comparatively small scale and the Council erases the practitioner's name with the clear intention of restoring it to the Register after a time — long enough to be a warning to him and to others not to repeat the offence. In most instances there is no difficulty in the process of restoration. But in the case of a practitioner holding only the Licence of the Society of Apothecaries of London the difficulty is insuperable. At least this is the opinion of the legal adviser to that body, whose conception of the law is that the Society is bound to remove from its list any name which has been erased from the Register and has no power to restore it though the General Medical Council should be of opinion that the time had come for restoring the practitioner to his place on the Medical Register. This is a complete deadlock, and one which cannot be too seriously considered by Licentiates of the Society of Apothecaries who hold no other qualification as well as by the General Medical Council. It enables the Society of Apothecaries to inflict a permanent

disqualification for a comparatively slight offence where no such punishment can be justified. Such a reading of the fourth section of the Apothecaries Amendment Act of 1874 seems to us to be forced and illogical. This section is plainly meant to enable the Society to follow the disciplinary action of the General Medical Council. The Society does so in the matter of erasure and declines to do so or asserts a *non possumus* in the matter of restoration, which is an absurd state of matters, converting a temporary into an eternal punishment and giving the Society of Apothecaries a penal power beyond that of the General Medical Council. Pending the correction or the different construction of the law those who depend for their claims to registration on the Licence of the Society of Apothecaries may well be careful to avoid the risks of erasure.

We have space to notice but one more fact—that at the recent meeting only two cases of unprofessional conduct pure and simple were brought under the notice of the Council. In one the practitioner—whose case had been investigated by the Council in June last and the decision in which had been suspended for six months—reconsidered his position and entirely satisfied the Council. The Council did not find him guilty of infamous conduct and the case against him came to an end. In another a charge of wrongful employment of an unqualified assistant was not supported by evidence satisfactory to the Council and the case against the practitioner failed. On the whole the inference is that the Council uses its penal powers discreetly and fairly and is entitled to have them more clearly defined and strengthened. Such strengthening is the end of the clauses elaborated with so much care by Sir WILLIAM TURNER for the amendment of the penal sections of the Medical Act.

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FROM the year 1837, when the Registrar-General's Office was established, down to 1874 the duties of the Registrar-General were almost exclusively administrative. When a new Government office is brought into being, however urgent the needs may have been which caused its creation, its duties will always require definition. There are things which it can do and things which it cannot do; there are duties which might belong to it if they were not already allocated to other departments; and the range of work, it will be found, cannot properly be estimated until the new department is actually in being, when its powers will more or less gradually be revealed to it. Then questions arise as to whether that range is large enough or too large, while the domestic side of its affairs and the scale of wages have to be settled. All this was done and done well in the Registrar-General's office from the beginning, as was the statistical work within its limits. But in 1874 the whole scope of the department was altered, for in that year the duty of certifying the cause of death of their patients was imposed by statute upon medical men. The Registrar-General was immediately brought into close relationship with the medical profession and a large amount of medical knowledge became necessary to the proper interpretation of the figures received at Somerset House. This relationship has become more intimate year by year, until it is no exaggeration to say that, whether he be a medical man or no, the duties of the Registrar-General at the present time are essentially of a medical nature.

The most onerous of these duties, for example, involve considerations of statistical importance which cannot be adequately dealt with otherwise than by a person possessing medical knowledge and experience. The Registrar-General has to organise and maintain in efficiency the registration service of the country, and to do this he has to instruct the various local registrars, some 2000 in number, in the attitude that should be adopted towards medical men, towards coroners, and also towards the relatives of deceased persons from whom it may be necessary to obtain the particulars required for registration in the absence of a medical certificate. Part of this work may be called purely administrative, but we venture to think that it is the unimportant part, while it is also the part which has been brought by years of well-directed routine to a position where the things to be done are done automatically. The vital part of the work is purely medical, for only a medical man can appreciate at their proper value the difficulties which at any moment may arise in a delicate matter of death registration. Again, the Registrar-General is responsible for the accuracy of the national death registers. This means that he must secure the careful examination and, where needed, the correction of every one of the half million certificates of death which are registered yearly in England and Wales, copies of which are sent to the central office for abstraction and compilation. Again, we venture to say that, given efficient organisation, the essential part of this work is medical and calls for medical knowledge of the highest order. For not only is the Registrar-General required, if he is to discharge his duties properly, and at first hand, to be familiar with medical phraseology, but he must also be well versed in the probabilities of disease, so that the exact significance of a certificate or of any group of certificates may be present to his mind as quickly as the documents meet his eye. The Registrar-General also prepares weekly, quarterly, annual, and decennial medical reports of mortality dealing with the cause of death in every part of the country. This is probably the most valuable of his highly valuable labours and can only be discharged by a medical man. The Registrar-General who is not a medical man can only follow the lead of a superintendent of statistics possessing the qualifications which he is without. For the value of the statistical information in these reports would be *nil* if the lessons taught by the figures were not interpreted through the medium of medical learning. Figures unchecked by knowledge would first be wrongly arranged and then wrongly interpreted, and the lessons to be derived from them would be worse than useless for they would be absolutely false. These are the figures which upon proper presentation through a medical statistician warn the public of the occurrence of an epidemic of disease in any locality in England and Wales, giving notice of the fact to the proper departments of the State and so forming a safeguard to our national health. For these figures are relied upon not only by the Local Government Board but by every medical man in the kingdom whether officially

connected with that Board or acting on his private initiative as the guardian of the health of his locality. The Registrar-General is required also to conduct statistical investigations for the various State departments, for Royal Commissions, and for Committees of both Houses of Parliament, and upon his figures questions of legislation directly turn. His statements are not checked by others, but are accepted as authoritative information culled from an unimpeachable source and upon them amendments of the law of the land may directly ensue. It is unnecessary to point out how urgent it is that figures fraught with such issues should be placed before our legislators in a form which actually represents their meaning; and no one but a medical man can do this. The Registrar-General also gives statistical estimates and other information necessary to medical officers of health for the compilation of population estimates and for reports on mortality, sickness, and the incidence of epidemics: no one but a medical man can do this. Lastly, he is the officer responsible for the taking of the Census of England and Wales. The Census reports are utilised for the preservation of the public health, for the administration of the Factory Acts, and for the exigencies of the labour department of the Board of Trade, as well as by medical officers of health throughout the country, so that it must be his constant endeavour to arrange the details in a manner in which they may best serve their various purposes. And no one but a medical man can do this.

We have said enough, we think, to show that the duties which the Registrar-General is called upon to perform are so thoroughly medical that when the medical part is subtracted little but official routine remains. As a matter of fact, the work that is now performed by the Statistical Superintendent, who is and must be a medical man, has become the essential work of the Registrar-General's Office, and we feel strongly that it is bad policy and bad economy that the essential work of the department should be performed by a subordinate. The duties which we have enumerated above, inasmuch as they are the chief care of the head of the department, should be personally attended to by the head of that department and consequently by a medical man. We understand that it is probable that Sir BRYDGES P. HENNIKER will shortly resign his post as Registrar-General. When this is the case we trust that the considerations which we have put forward will prevail in the selection of his successor. The brilliant results which have followed the appointment of Dr. WHITELEGGE as Chief Inspector of Factories of the Home Office should encourage the Government in placing a medical man at the head of a department where the work is almost exclusively medical in character.

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THE list of examinations in general education recognised by the General Medical Council has undergone a few modifications which came into force on Jan. 1st. We are pleased to see the erasure of the "*second*-class certificate of first or second division of the examination of the College of Preceptors," and also of the "preliminary examination for medical students" at the same institution. The Council has also wisely recommended that the preliminary examination of the Royal Colleges of Physicians and Surgeons in Ireland should be discontinued. To all of us who are desirous that the preliminary examinations for entrance into our profession should not run below a due minimum these changes are most satisfactory, but do they go far enough? The required subjects are English language, Latin, mathematics (including Euclid, Books I., II., and III.), and Greek, or some modern language, and it is only in the past few years that it was necessary for the student to pass in these subjects at one time. On looking over the recognised list of examinations we still find junior, lower, and middle grade examinations included, and it is well known that in some of the examining bodies the standard is still none too high. The Education Committee of the General Medical Council has recently sought the assistance of experts in the general education of this country, and a more pitiful account of its average character can scarcely be imagined than that presented in the report of the Committee to the Council at its recent session. The experts consulted were the Rev. T. W. SHARPE, Professor W. S. MCCORMICK, and Dr. J. MCGRATH, as being thoroughly conversant with the condition of secondary education in England, Scotland, and Ireland respectively. Their unanimous report is as follows, and we trust it will attract the attention of the school authorities in the three divisions of the country:—

"We have considered the question whether the senior and higher grade examinations should be substituted for junior. Taking into account the present state of secondary education in the country we see no possibility of enforcing such a requirement in the near future. A demand of this kind would certainly result in defeating the end which the General Medical Council have in view. Either it would diminish to an indefinitely large extent the number of candidates entering the profession, or it would compel the examiners to a laxity of marking and a depreciation of the standard of questioning, which would merely have the effect of lowering the senior papers to the level of the junior papers. The standard of the medical preliminary examination must depend upon the general standard of the secondary education of each country in which the examination is held, and a standard too high for one might be found too low for another. We think, however, that the immediate object of the General Medical Council would be gained by the gradual raising of the standard of the lower 'junior' examinations to the level of those 'junior' examinations which in our opinion rank highest."

We can scarcely believe that the abolition of junior grade examinations would diminish to an indefinitely large extent the number of candidates entering the profession, and the suggestion that educational bodies would only depreciate their standard from a senior to a junior level is surely too severe a statement to make of our examination boards and one that can hardly be justified. It is obvious, however, from the discussion at the General Medical Council that any important reform in the general education of the medical student will be postponed for years and that the existing minimum standard is due to the kind of education which scholastic experts admit to be still in vogue in the secondary education of our scholars in the respective divisions of the kingdom. Individual communications to the examining bodies as to the improvement of their scope and standard can only be regarded as a futile waste of time and energy until the conditions which have now been published shall have been altered.

# Annotations.

"Ne quid nimis.

## THE LATE SIR JAMES PAGET.

ALMOST coincidently with the close of the year 1899 came the life's end of one of the foremost figures in the world of medical science which this century has produced. We speak elsewhere in full detail of the life and work of James Paget, but we may here express our intimate sense of the loss which the profession has sustained. By his wonderful insight into the various processes of pathology, by his power of storing up details and his faculty for comparing one with another he rendered incalculable service to the science of medicine and so to suffering humanity. His influence as a teacher was always for good, and the great hospital in which he took such an interest, within whose walls he did such admirable work, has never, since the days of Rahere, had a more faithful or upright servant.

## THE NEW YEAR HONOURS.

THE list of New Year Honours although containing no names of very special distinction yet brings into prominence many of those who have done and are doing unobtrusive work for the Empire. Among the new Knights are the names of Mr. T. Lauder Brunton, M.D. Edin., F.R.S., and of Mr. F. H. Lovell, C.M.G., Surgeon-General of Trinidad. The work of Sir Thomas Lauder Brunton with reference to Pharmacology and Therapeutics and his services in connexion with the Hyderabad Chloroform Commission, on which he represented THE LANCET, are well known to our readers. As a physician of high standing and as a man who has unobtrusively worked hard in the profession to which he belongs the distinction that has been conferred upon him will be received with cordial satisfaction by all who know him. Sir Francis Henry Lovell, who is a member of the Executive and Legislative Council of Trinidad, at one time held the appointments of chief medical officer, President of the General Board of Health, and member of the Legislative Council of Mauritius. The Honourable John Alexander Cockburn, M.D. Lond. and Adel., formerly Premier of South Australia and now Agent-General in London for that colony, is made a Knight Commander of the Order of St. Michael and St. George, and four other members of the medical profession have been appointed Companions of the same Order—namely, Mr. John Pringle, M.B., C.M. Aberd., who is a member of the Privy Council and Legislative Council of the Island of Jamaica; Mr. Patrick Manson, M.D., LL.D. Aberd., who, as medical adviser to the Colonial Office, has done not a little in the cause of tropical medicine; Mr. Wordsworth Poole, M.B., B.C. Camb., the principal medical officer of the West African Frontier Force; and Mr. Archibald Donald MacKinnon, M.D. Aberd., principal transport officer for Uganda. Although not members of the medical profession the Right Hon. Sir John Lubbock, F.R.S., who has been made a peer, and Captain Abney, C.B., F.R.S., who has been promoted to Knight of his Order, have done work which bears both directly and indirectly upon medicine and public health. Captain Abney in particular has by his researches into the nature of light and its phenomena, embracing the physiology of vision, rendered great service to our profession. We congratulate all these gentlemen in the name of medical science.

## THE ROYAL INSTITUTION OF GREAT BRITAIN.

THE list of Friday evening lectures to be delivered at the Royal Institution before Easter gives promise of a very interesting and instructive session, and among the lecturers will be Signor G. Marconi who on Feb. 2nd is announced to deliver a lecture on Wireless Telegraphy. In the list of subjects which have some connexion with medicine we note that Professor J. Reynolds Green will deal on Feb. 9th with "Symbiosis and Symbiotic Fermentation"; Major Ronald Ross, I.M.S., on March 2nd will lay before his audience some information with regard to Malaria and Mosquitoes; Professor Frank Clowes will on March 9th discourse on "Bacteria and Sewage"; and Professor J. Arthur Thomson on March 30th will discuss the "Facts of Inheritance." On Thursdays, Jan. 18th, 25th, and Feb. 1st, Dr. W. H. R. Rivers will deliver three lectures on "The Senses of Primitive Man."

## THE LANCET RELIEF FUND.

THE report made this year by the almoners of THE LANCET Relief Fund carries on in a very remarkable way the thread of last year's report and enables us to refer to it as confirming the inferences which we then drew from what seemed to be settled features of the administration of the Fund. We had last year to remark that the benefactions showed a reduction both in number and amount and that there was a marked tendency for the benefits to take the form of gifts rather than of loans. Save as to the reduction in the number of benefits these observations apply equally to the facts disclosed by the present report. It happens, curiously enough, that the number of benefits is precisely the same this year as last, but on this occasion only one case has taken the shape of a loan; the rest have all been out-and-out gifts. We have, therefore, a broader basis to-day than we had 12 months ago for the pleasing deduction that the pressure of necessity upon those of our professional brethren and their immediate dependents who have fallen upon evil times is sensibly less acute than it was when the Relief Fund was founded. Coinciding as this improvement does with improved conditions of general prosperity it may be reasonably referred to this more general improvement as its cause and looked upon accordingly as a real, not merely as an apparent, amelioration in the condition of those of our fraternity upon whom the times press hardest. The singular, if not quite absolute, absence of applications for loans points in the same direction and this is the more marked in the present because attention was expressly drawn last year in our columns to this feature of the almoners' work and we then pointed out that of the various cases which are presented for consideration there is none in which it is possible to extend a helping hand with a livelier sense of satisfaction than the case in which a timely loan helps a brother overtaken by adversity to help himself. That, however, is no great matter. The feelings of the benefactor do not count in comparison with the advantage of the beneficiary, and we hope with much confidence that the benefits conferred by this Fund take the shapes in which they are most serviceable to those in whose interest they are bestowed. It is again our privilege to make public acknowledgment of the generous services rendered to this charity by the distinguished men who have associated themselves with it in the capacities of almoners and auditor. We refer, of course, to Sir Samuel Wilks, late President, and to Dr. W. S. Church, the President of the Royal College of Physicians of London; Sir William Mac Cormac, President of the Royal College of Surgeons of England; Sir William Turner, President of the General Medical Council; and Sir Henry Pitman, for many years associated with the first-named body as its registrar. The absence of Sir William Mac Cormac's name from among the signatures appended to the report reminds us that his presence at the seat of the war in South Africa is a fine example of practical patriotism which the nation will not be slow to appreciate. Nor is the presence of

Sir Henry Pitman's name less suggestive, who in the fulness of many years brings a mind still vigorous in age and most notable alertness to bear upon the examination of the accounts. In presenting to each and all of them our thanks we assume to speak not only for ourselves as donors of the Fund, to whom its due administration is naturally a matter of solicitude, but in the name also of those who benefit by it and whose gratitude, not always articulate, is in not a few cases evidenced by expressions which it is a privilege to acknowledge but a satisfaction largely alloyed with sympathetic sorrow to receive. The application form of THE LANCET Relief Fund will be found in our present issue and can be readily detached for use in case of need. We again take an opportunity of asking those of our readers who may have occasion to assist in furthering any application made for relief from this source to note carefully the conditions on which applicants become entitled to participate in the benefits of the Fund, as it is still found that many requests are put forward which are so far outside the objects of the benefaction that they cannot be entertained and from such applications nothing but disappointment can result. All applications should be made (in writing) to the Secretary, Mr. Edward Davies, THE LANCET Offices, 423, Strand, London.

## A MATTER FOR THE MEDICAL OFFICER OF HEALTH AND OTHERS.

MR. FRANCIS E. COLENSO writing to the *Times* under date Dec. 29th with regard to the incarceration of some natives of South Africa at Olympia says that owing to the outcry against certain natives employed at Earl's Court in the performances during the exhibition which was held there last summer the management at Olympia met the situation by simply shutting up the Zulus "within the walls of Olympia, where, except when performing, they spent their days in the twilight of a single large room, being about 50 in number with two women and a little girl." The letter really deals with the question of restricting the liberty of the Zulus, which does not come within our province, but the quotation from the letter which we have given would seem to indicate the existence of a state of things into which inquiry ought to be made. If the facts are as stated the incarceration not only constitutes a violation of the law, but forms a real danger to public health.

## ANTI-ALCOHOLIC SERUM.

THE Paris Academy of Medicine at its meeting of Dec. 26th listened to a very interesting paper communicated by MM. Broca, Sapelier, and Thiébaut on the discovery of a so-called anti-alcoholic serum which has already created a great deal of excitement in the daily papers and which looks rather like a trade advertisement. The three observers in question started from the principle that in alcoholic intoxication, as in morphia intoxication, there is a preliminary period which is characterised by gradual toleration of the drug and a feeling of desire for the poison. On the other hand, it is well known that certain organic poisons, more especially those produced by microbes, form in the organism antitoxins which represent the elements of resistance which the organism offers to infection. These antitoxins injected into another organism place that organism in a state of being able to resist the corresponding poison. The observers therefore determined to make research on these principles into the action of alcohol. They produced tolerance to alcohol in the horse by giving it by the mouth and then found that the serum of this horse injected into other animals which had been made tolerant and fond of alcohol produced in the animals in question such a distaste to alcohol that they preferred to give up both eating and drinking rather than continue to take alcohol. The injection of this serum in large doses has produced neither in animals nor man any unpleasant symptoms either local or general. M. Broca and his colleagues proposed to call this substance "antiethyline." Clinical experiments made upon drunkards had given most interesting and somewhat inconceivable results. The drunkard treated with antiethyline lost all his taste for alcohol; he no longer cared for brandy, rum, or absinthe, but he preserved a liking for wine and his appetite and strength returned. Up to the present antiethyline seems powerless to make any improvement in the organic alterations produced by the action of alcohol. It is only right to say that this thirsting serum which does away with any hungering after brandy but preserves the taste for wine was received by the Academy with smiling incredulity.

## SEATS FOR SHOP ASSISTANTS.

WITH the first day of the new year the Seats for Shop Assistants Act came into force and with it we hope the amelioration of much suffering among a certain class of women. We say "amelioration" because the evil that has been wrought by compelling women to stand all day long in shops through ignorance and prejudice must still take time before it can be eradicated altogether. It is with particular pleasure that we announce the coming into operation of this Act because we have for years pointed out the evils of long standing in shops, more especially in regard to drapery establishments. The new Act, which is practically part of the Shop Hours Acts, is wide in its application as will be seen from the following clause:—

"In all rooms of a shop or other premises where goods are actually retailed to the public, and where female assistants are employed for the retailing of goods to the public, the employer carrying on business in such premises shall provide seats behind the counter or in such other position as may be suitable for the purpose, and such seats shall be in the proportion of not less than one seat to every three female assistants employed in each room."

The first offence of non-compliance with the provisions of the Act carries with it on conviction a penalty not exceeding £3, and subsequent offences a penalty not exceeding £5, with a minimum of £1. The new Act will be welcomed by the hard-working girls of our shops, and inasmuch as the evils from which the girls suffered frequently extended into family life the community at large is to be congratulated.

## THE DISSEMINATION OF ANTHRAX.

THERE is good reason to hope that the number of cases of anthrax will, in the near future, be considerably diminished. Horsehair imported from China and some parts of Russia has long been suspected of being a source from which anthrax spores are introduced into this country, and this is now known to be the case. It would indeed be difficult to believe that those who direct the operations of the horsehair trade here were indifferent to the danger to which they, in common with their employés, are frequently subjected. The public will be interested to know that results which individual efforts on the part of manufacturers have hitherto been unable to effect are likely to be secured by the combined action which has now been organised by the leading members of the trade. Systematic inquiry has confirmed previous suspicion, and on Sept. 27th, 1899, at a meeting, held in London, of the principal firms engaged, the following resolution was passed:—"That the manufacturers present hereby bind themselves from this date to buy no Russian, Siberian, or Chinese undyed mane hair until satisfactory guarantees are given by the sellers that the hair has been thoroughly disinfected." Steps were also taken to

ensure as far as possible that this action should become general throughout the trade. The recent cases reported by us on Nov. 18th, 1899, which is subsequent to the date of the foregoing resolution, have been made the subject of a very thorough inquiry by Dr. T. M. Legge, medical inspector of factories, on behalf of the Home Office, whose efforts have been ably seconded by those of the manufacturers upon whose premises the cases mentioned occurred. The inquiry resulted in the discovery that a small bale of Chinese hair, purchased some time prior to the resolution of September, was impregnated with anthrax. This bale proved to be part of a consignment landed in England about April last, whilst two other cases of anthrax occurring in other districts have been traced to other bales forming part of the same consignment. The bacteriological examinations in connexion with this case were conducted by Dr. F. W. Andrewes, pathologist to St. Bartholomew's Hospital. Eventually the infected bale, while still unopened, was submitted to the dry action of super-heated steam, but this was found insufficient for the purpose of complete disinfection, cultivations being afterwards made from portions taken from the interior of the bale; finally the bale was immersed in boiling water for several hours. We have frequently pointed out the necessity for disinfection either previously to shipment or immediately after unloading at the port. It is true that the danger to those using horsehair properly prepared is reduced to a minimum, as in the process termed "setting the curl" the hair is subjected in ovens to a temperature of some 500° F., which is sufficient to ensure sterility in any germs that may be present. The greatest danger to the general public lies in the transport of infected material, and it is hoped that the action now referred to will have the desirable result of reducing that danger to a minimum.

## "AIDS TO THE POOR IN A RURAL PARISH."

UNDER the above title Dr. T. N. Brushfield has collected a mine of interesting information in a paper which he read before the Devonshire Association for the Advancement of Science, Literature, and Art in August 1899. Before the Reformation there was no organised system of poor relief. The monasteries and the great religious houses gave charity in the shape of food and shelter to all the needy wayfarers who asked at their gates, but, as Dr. Brushfield points out, the position of the poor in little out-of-the-way parishes was very different. Relief in their case was almost entirely due to the efforts of the parish priest, who was generally in no way too well off, and to the generosity of the wealthy land-owners. After the spoliation of the Church the State awoke to the idea that something must be done for the poor, and voluntary effort being a marked failure the first poor-rate was empowered for collection by an Act of the reign of Elizabeth. The recognised poor-law medical officer only dates from the early eighteenth century. Previously to that date a medical man was called in as occasion arose, or more commonly the local wise man or woman. At Barnstaple in 1629 Dr. Symes was engaged by the Mayor and Corporation to reside in the town and give advice to the poor at £20 per annum for two years. At Widecombe-in-the-Moor Dr. Ball received £8 for "curing of Dorothy ffrench's legg and keeping the same sound from any more costs and charges." This payment, however, seems to have been somewhat "previous" for Dr. Ball had to return £4 "because he did not p'fect and continue the cure according to his promise." The following is a delightful item: "Ockley, Surrey, 1740. Paid for 5 pills for David Worsfold's wife 00. 00. 02½." The Settlement Act, by which strangers could be removed to their own parishes, was the cause of much inhumanity and hardship. The eighteenth century, great as it was in many ways, was not remarkable for kind treatment of the poor. For instance, the registers of St. Giles, Cripplegate—it is one of life's little ironies that such proceedings should have taken place under the ægis of St. Giles—contain such entries as the following: "1725. To A. Walsham for getting a dying man out of ye Parish 0. 1. 0. To a person for getting a dieing man out of ye parish 0. 0. 6." Death, of course, sometimes ensued upon these removals, as witness the following pathetic entry from the registers of Milton Abbot, Devon. "1588. Payd to Wm. Ketowe for a shroud for a poor man which dyed within this parishe which was carried from tythinge to tythinge ..... xvjd." The Poor-law is not perfect now but it has improved. We have only selected the more purely medical portions of Dr. Brushfield's interesting paper upon which to comment, but besides these it contains a vast amount of valuable information upon early poor relief which makes it well worth reading as a whole.

## DEATH WHILST UNDER ETHER: ASPHYXIA FROM ŒDEMA GLOTTIDIS.

THE following case, the notes of which are kindly supplied by Miss Aldrich-Blake, M.D., M.S. Lond., presents some unusual points of interest. The patient, a woman, aged 23 years, was under treatment at the Royal Free Hospital for an abscess below the left ramus of the mandible. Her general state was poor but she had no obvious dyspnœa and no circulatory embarrassment. There were great œdema of the glottis and thickening of the tissues caused by the cervical abscess. On Dec. 6th she was given ether by Miss Watts, M.B., the assistant anæsthetist to the hospital. A Clover's inhaler was used. The patient breathed quietly for four minutes, then respiration became shallow and very rapid. The face-piece was removed and not again re-applied. The "lid-reflex" we are told "was brisk," but the patient was very pale. No cyanosis was present. From this moment, however, the respiration became increasingly shallow and cyanosis appeared and deepened, and finally breathing ceased. To relieve these symptoms the jaw was pushed forward and the tongue was drawn out while artificial respiration was practised. Air did not enter the lungs freely nor did the cyanosis lessen. Artificial respiration was kept up for half an hour. The heart beats were felt for some time after natural breathing had ceased. Strychnine and ether were injected hypodermically. The necropsy showed marked œdema of the glottis. In cases of angina Ludovici, abscesses, and the like causing pressure upon and inflammatory thickening around the glottis, dangers associated with anæsthetics are peculiarly liable to occur. In the matter of choice of the anæsthetic we are very doubtful whether ether offers the best chance of escaping the inherent perils of the situation. It increases the fulness of the neck, promotes dyspnœa, and induces cyanosis. Certainly, if œdema glottidis is known to exist ether is not, in the view of many experts, the best agent to employ. On the other hand, it must be admitted that in the less severe cases of angina Ludovici ether can be given without greatly increasing the dyspnœa. In the present case there appears to have been no cardiac weakness, so that ether was not peremptorily called for to sustain a flagging circulation. Reverting to the best means of helping patients in such grave danger it appears difficult to understand why the obstruction to respiration, which appears from the notes before us to have been purely mechanical, was not removed by opening the trachea below the seat of obstruction. In some cases such an operation is extremely difficult if not impossible, but clearly it is the thing to do if artificial respiration fails to aerate the blood. There are other remedial measures which suggest themselves. The forcible traction on the epiglottis or base of the tongue with a tenaculum certainly opens the rima when tongue traction with forceps fails,

but if the œdema has closed the laryngeal chink this manœuvre may fail. Intubation and forced respiration by means of bellows can be successfully employed when the external swelling and displacement of parts render a tracheotomy or laryngotomy impossible. Professor Wood contends that forced respiration is in all cases more valuable than Silvester's method of artificial respiration. In commenting upon this case we wish to be understood to make no adverse strictures upon the manner in which the hospital authorities carried out their difficult task of attempting to save the patient's life. Measures which appear obvious to those who read an account of an emergency such as has been described cannot always be adopted and only those who are actually present and who know all the circumstances of the case can decide what can be done and what cannot be done to avert threatened dangers.

## THE LIVINGSTONE EXHIBITION.

THIS exhibition, opened on Jan. 1st in St. Martin's Town Hall by the Livingstone College, was intended to instruct the public and travellers in particular in the requirements necessary to health when exploring unknown tracts of country and when residing in climates more or less unhealthy. Portable beds and other articles of furniture, clothing, foods of various kinds, and medicines suitable for travellers were shown and the collection thus brought together has no doubt proved highly useful to the missionaries and others to whom the exhibits practically appealed. On Thursday last Major R. Ross, I.M.S., gave a lecture on the Malarial Mosquito, and to-day (Friday) Miss Kingsley lectures at 3 P.M., and Dr. Harford Battersby, M.A., gives a lecture on the Preservation of Health in Tropical Climates at 5.30 P.M. An interesting feature of the Exhibition was the collection of relics of Dr. Livingstone, arranged by his son-in-law, Mr. Frank Wilson, and loaned by various people and societies. Mementoes of Mungo Park, Speke, Burton, and other explorers were also included. We need not point out the usefulness of such an exhibition as this if made a permanent one, and it is to be sincerely hoped that the Livingstone Exhibition is but the forerunner of a free public exhibition on similar lines. There should be no difficulty in bringing this about seeing that the Livingstone Exhibition is under the patronage of the Princess Christian and is supported by leading members of both the medical and clerical professions, whilst various Government Departments, the Royal Geographical Society, and the Royal Colonial Institute gave their support or expressed their approval of its objects.

## METHOD OF EARLY DIFFERENTIATION OF TYPHOID FEVER.

PIORKOWSKI[1] reports at length on 40 cases in which he was able to make the diagnosis of typhoid fever from the third day of the disease to three days after the subsidence of the fever and was successful in doing so on occasions when the Widal test failed. The method consisted in making cultures from the fæces of suspected cases, and is as follows:—The nutrient medium is prepared by using a one-half per cent. solution of peptone with 3·3 per cent. solution of gelatin. To this mixture is added a small quantity of normal urine which has been kept for a few days at the ordinary temperature of the room until it has become slightly alkaline. The three-fold mixture is now filtered and sterilised in test tubes for 15 minutes at a time on two successive days. The medium thus prepared can be spread on sterilised glass plates and cooled by ice until solidified. Loop cultures from the fæces are made on the plates thus prepared and the plates thus inoculated are transferred to a thermostat and kept at a temperature of from 21·5° to 22° C. In from 15 to 24 hours colonies of the typhoid bacilli appear in small, clear, oblong groups, the margins of which gradually become round as the colony enlarges. They now appear of a yellowish colour, finely granular, and surrounded by a delicate characteristic tangle of filaments set out in spiral form in the gelatin. (The colonies of the bacillus coli communis are sharp-edged, coarsely granular, darker in colour, and larger than the above.) It is important to note that these results are confirmed by other observers. Thus Schütze confirms Piorkowski's views with his experience of six cases, and states that the method is of "remarkable, even decisive importance in establishing a positive diagnosis in the early stage of typhoid fever." Unger reports 12 cases thus diagnosed, but records two others in which the technique failed because the urine was too intensely alkaline. H. Wittich after putting the process to a careful test[2] confirms the results reached by Piorkowski. He supplements, however, the original observations of the latter by pointing out that the colon bacillus grown on this medium may occasionally simulate the appearance of the typhoid culture colonies rather closely. In this case the former can be distinguished by the pink colour, the faint indol reaction, the curdling of milk, and the production of gas with a ¼ to ½ per cent. grape-sugar bouillon.

[1] Deutsche Medicinische Wochenschrift, Nov. 26th, 1899.

## "THE MEDICAL SERVICE OF THE HEBRIDES."

WE are glad to know that our leading article on this subject has received a considerable amount of attention. Mr. H. Smith, burgh sanitary inspector, and Dr. C. M. Macrae, medical officer of health of Stornoway, in a letter to the editor of the *Highland News*, object to the suggestion that Lewis is a home of typhus fever and, with the other islands of the Hebrides, a source of risk to large towns. The general drift of our article on the medical service of the Hebrides was to point out the inadequacy of the medical service, the need for more isolation hospitals and for more nursing in dealing with infectious disease. We adhere to our statement that Lewis is a home of typhus. Dr. Bruce says in his report for 1898 that "typhus still lingers in Lewis." On page 9 of his report he says: "With regard to hospitals I repeat that such are absolutely essential where the living houses are so bad. To be properly treated the patients must be removed from the polluted atmosphere reeking in germs to the clean pure air of a small properly warmed and well-ventilated infirmary. As has been pointed out to me by our most distinguished living sanitarian, such removal is needed more even for the safety of the nurse than for the care of the patient." He adds: "In typhus this is a serious danger, as was proved lately not very far from ourselves." In the same report he quotes Mr. R. Ross's report on the parish of Barvas: "Two cases of typhus occurred at Borve in April and other two at South Bragor in June. There was one case each of typhoid, puerperal fever, and erysipelas, and *seven cases of continued fever*. There were two cases of diphtheria and four of scarlatina." The italics are ours. Dr. Macrae and the sanitary inspector boast in their letter, and no doubt too truly, of the familiarity of the medical men of the island with fever varieties. Yet here are seven cases of fever undefined, of which it is not uncharitable to suppose that several, if not all, were mild cases of typhus. Dr. Bruce at any rate will not quarrel with us for regarding Lewis as a home of typhus fever or in thinking that the mere use of disinfectants will do little to abate the insanitary condition of the island and the neighbouring islands, while such home conditions exist as are indicated in his reports and those of Dr. O. Grant, the medical officer of health of

[2] Centralblatt für Bakteriologie und Parasitenkunde, Oct. 28th, 1899.

Inverness-shire. Dr. Grant, at page 32 of his report for 1898, quotes Mr. D. Fletcher, parochial medical officer of North Harris, to the following effect: "I regret to find that, in spite of all pressure brought to bear on the cattle housing system, there are still some in North Harris who stick with dogged persistency to the traditions of their fathers and keep their cattle under the same roof as themselves. There is room for much improvement in the housing of the people generally, the old mud wall being still the rule. One need hardly expect to stamp out typhus when such suitable media for the preservation of its germs exist."

## MICROBES IN HOLY WATER.

OUR Rome correspondent, in his letter which appeared in THE LANCET of Dec. 23rd, 1899 (p. 1782), made the suggestion that the salt which from the earliest ages has been mingled with the water used for ceremonial purposes should be modified so as to make it a true disinfectant. Salt as the best known and probably the earliest used substance for preventing decay was most likely added originally purely from its symbolic meaning, though possibly the symbolism, as in so many other instances, grew side by side with the literal meaning. According to the *Catholic Times*, of Dec. 29th, 1899, the *Osservatore Romano* does not fall in with our correspondent's suggestion, avowing that, the water being holy, needs no human treatment and has never hitherto been regarded as a channel of disease. The *Catholic Times* goes on in the following eminently sensible fashion, "God has given us intelligence for use and even when He blesses requires us to take the ordinary precautions which reason suggests. The argument that no change is advisable because the necessity for it has not been suspected before now cuts at the ground of improvement." We are glad to be able to note these remarks of our contemporary as showing the accordance of common-sense lay opinion with that of scientific men. We have previously pointed out[1] how the Church has always taken cognisance of men's bodies as well as of their souls. There must be no standing still in either religion or science, for in both the intellect is striving to reach heights at present beyond it, but which shall one day be attained, and that which is now dark shall be made light.

## KERNIG'S SIGN IN MENINGEAL HÆMORRHAGE.

IN 1884 Kernig described a phenomenon which he thought was found only in affections of the pia mater and always in inflammations of it. When the patient is recumbent the legs can be easily extended on the thighs, but when he sits up extension is rendered impossible by contracture of the flexor muscles. After having attracted but little notice during 14 years Kernig's sign has recently received considerable attention and has been found to be of great value in the diagnosis of meningeal diseases. In the main Kernig's conclusions have been confirmed; the sign appears to be present in about from 80 to 90 per cent. of cases of meningitis. At the meeting of the Société Médicale des Hôpitaux on Dec. 1st, 1899, MM. Fernand Widal and Prosper Merklen called attention to the occurrence of Kernig's sign in cases of meningeal hæmorrhage and to its diagnostic value. Cases of meningeal hæmorrhage in which the sign has been observed are rare, though such have been recorded by Kernig himself. MM. Widal and Merklen related the case of a healthy man, aged 32 years, who while writing in his office without any premonitory symptoms fell from his chair unconscious. He regained consciousness in some hours without having shown any change in temperature, paralysis, or contracture. He complained only of intense headache affecting the whole head and then of pain in the back. Movements of the trunk were difficult and painful. The pupils were slightly dilated, the eyes were suffused with tears, and the face was congested. There was neither albuminuria nor glycosuria. When the patient was recumbent the legs were extended on the thighs, but when he sat on the edge of the bed the legs became flexed in contracture and could not be extended. He remained in this state for four days. On the fifth day the temperature rose to 100·4° F. and there was slight contracture of the neck; on the sixth and seventh days the temperature oscillated between 100·4° and 101·8°. Kernig's sign persisted and the headache and backache were intense. On the ninth day death occurred suddenly from syncope. At the necropsy a clot was found beneath the arachnoid membrane extending as far forward as the optic nerves; it was prolonged on the anterior surface of the pons, medulla, and cord as far as could be seen through the foramen magnum. The spinal canal was full of liquid blood. The posterior and superior region of the cord was congested. The posterior spinal artery was dilated and was full of little disseminated clots. This was the only lesion of the central nervous system found after the most minute examination. The mechanism of the meningeal hæmorrhage escaped observation. Probably syphilis (which the patient had contracted seven years previously) played a part. In this case but for Kernig's sign a meningeal lesion would not have been suspected. No doubt irritation of the meninges by the clot is the cause of the phenomenon.

[1] THE LANCET, Sept. 18th, 1897, p. 733.

## DERMOID CYST OF THE OVARY WITH TWISTED PEDICLE IN A CHILD.

IN the *Boston Medical and Surgical Journal* of Sept. 28th Dr. J. V. Meigs has published a case of this rare condition which is further interesting in consequence of urinary symptoms which caused difficulty of diagnosis from hydronephrosis. A female child, aged 10 years, was healthy except for occasional painful micturition with incontinence or suppression of urine. While playing she fell from a swing on the buttocks. Immediately intense abdominal pain supervened, which increased. On undressing the child the mother noticed for the first time a swelling in the abdomen. The patient was sent to a hospital, where distended bladder was diagnosed, but on catheterism only about an ounce of urine was obtained. The abdomen was very tender and somewhat tympanitic, and examination was possible only under an anæsthetic. The child was beginning to show evidence of shock. Hydronephrosis caused probably by a kink or twist of the ureter from the fall was diagnosed. When the patient was anæsthetised a somewhat solid tumour as large as a cocoanut and moveable was found below and to the right of the umbilicus. Laparotomy showed a dermoid cyst of the right ovary with the pedicle twisted one and a half times. The cyst was dark from impairment of the circulation. It was removed and found to contain sebaceous matter, cartilage, and bone. Recovery ensued.

## CELLAR DWELLINGS IN STOCKPORT.

DR. CHARLES PORTER, the medical officer of health, recently submitted to the Sanitary Committee of the Town Council of Stockport a report upon cellar dwellings. On Nov. 3rd, 1899, Mr. Justice Bucknill made some remarks upon certain evidence which was given and inquired if there were no law in Stockport that people should not live in these cellars. A Manchester paper further stated that some of these dwellings were "practically of modern construction." Dr. Porter points out that in the opinion of

the borough surveyor no cellar dwelling has been erected since 1875 owing to the Public Health Act of that year prohibiting their erection. As to Mr. Justice Bucknill's question there is no law in Stockport or anywhere else to prevent people living in a cellar because it is not so clean as it might be (which was the only evidence given before the court as to the cellar in question). The Public Health Act of 1875, however, lays down certain requirements for cellar dwellings. Dr. Porter, in mentioning that there are still 157 cellar dwellings in Stockport, states that they have been periodically visited and inspected with regard to the requirements of the Act. Most of them are nominally deficient in one respect or another, 68 have no drain, and 57 are without any means of through ventilation. Dr. Porter points out that many of these dwellings are kept scrupulously clean and afford a last asylum to "scores of poor worn-out old souls." He therefore thinks that the strict letter of the law should not be enforced but that the cellar should only be closed when the tenant leaves. He concludes his report by asking if it be not possible as an ordinary commercial speculation to provide dwellings in which deserving old people could get a healthy room for 1s. per week. We are glad to see that the Sanitary Committee are not going to alter their mode of procedure so that the aged tenants will be undisturbed until they "leave." Cellar dwellings are not desirable but there are occasions in which mercy is better than sacrifice.

## CHARITABLE BEQUESTS AND DONATIONS IN 1899.

IN summarising the bequests left to hospitals and medical charities during the past year the *Charity Record and Hospital Times* says that £1,390,136, as against £1,303,720 in 1898, have gone to medical charities. Referring to donations our contemporary remarks that it is impossible to make any comparison. "Up to the commencement of the war large donations were fairly frequent, but in the last few months they have been more conspicuous by their absence." Early in the year the executors of Mr. F. C. Baines gave £10,000 to the National Lifeboat Institution, and Mr. W. Cadge gave £10,000 to the endowment fund of the Norfolk and Norwich Hospital, while Mr. J. Wheeler Bennett, as a New Year's gift, presented the Bromley (Kent) Cottage Hospital with £4,000. Mr. J. Robinson undertook to build a new wing to the Nottingham Hospital. Mr. E. P. Wills gave £25,000 to the Bristol Jubilee Convalescent Home. "Mr. A. H. Moncur has offered to build a Sanatorium for Consumption at Dundee at a cost of £10,000, and an anonymous donor offered £5000 for five years if the scheme were carried out, and both offers have been accepted. The anonymous donor 'M.' has given another £5000 to Guy's Hospital. The Earl of Leicester has given another £5000 to the Norfolk and Norwich Hospital, thus raising his total gifts to this institution to £40,000. With a view to enabling the committee of the Newcastle-on-Tyne Infirmary to claim a large legacy Mr. J. Eno gave £8500. The Duke of Westminster presented the Eclipse Stakes of £10,000 to the Royal Alexandra Hospital, Rhyl. Mrs. T. Lund has offered £5000 to establish almshouses at Pudsey and Lord Ashton has handed a cheque for £10,000 to the secretary of the Royal Albert Asylum for Idiots, Lancashire."

WE beg to call the attention of our readers to the letter signed by Dr. Frederick Roberts, Mr. Edmund Owen, Dr. W. Collingridge, Dr. W. Duncan, and Dr. J. E. Squire, appealing to the younger members of the profession to enrol themselves in the Militia, Yeomanry, and Volunteer forces. In the face of present circumstances it becomes the duty of every man to bear any part that he can in our Imperial defences, and we feel sure that the medical profession will not be slow to respond to the appeal of Dr. Roberts and his co-signatories.

## AN HISTORICAL RECORD OF THE USE OF PRESERVATIVES AND COLOURING MATTERS IN FOOD,

ACCORDING TO THE INQUIRIES OF THE ANALYTICAL SANITARY COMMISSION OF THE LANCET FROM 1851 TO THE PRESENT TIME.

As is well known, the question of colouring matters and preservatives in food is receiving the earnest attention of a committee of inquiry appointed some months ago by the Local Government Board. Already a considerable amount of valuable evidence has been given which in view of its importance and of its great public interest we have published and shall continue to publish at length in our columns. We may claim fairly, we think, to have adopted an initiative inquiry upon the subject in its modern aspect ourselves three years ago when we invited certain recognised authorities on food and drugs to give us their opinions, which we subsequently published, together with the results of our own work, in THE LANCET of Jan. 2nd, 1897, page 56, under the heading of THE LANCET Special Sanitary Commission on the Use of Antiseptics in Food. These opinions were summarised by our own Commissioners and we believe that this contribution on the subject has been of material service to the Preservatives Committee. The purpose of the present article is to show that the subject has an interesting history dating back, so far as the work of THE LANCET is concerned, nearly half a century.

Undoubtedly attention was first drawn to the preservation and artificial colouring of food with the commencement of the labours of the Analytical Sanitary Commission of THE LANCET which was instituted in the year 1851 by the late Mr. Thomas Wakley, M.P., the Founder of the journal. The gross forms of fraud which this Commission brought to view were in the main not related to the specific subject which the present Committee on Preservatives are considering. Nevertheless some important matters were touched upon which bear distinctly upon the history of the employment of preservatives and colouring matters in food, and which, therefore, we venture to think are of special interest at the present time.

The first report dealing with the adulterations of coffee contains little that is germane to the subject, but in THE LANCET of Sept. 20th, 1851, page 279,

### THE ADULTERATIONS OF MILK

are described. In this article mention is made of the use of turmeric added for the purpose of producing in milk a richness of colour, making the dilution with water and abstraction of cream less apparent. In the same article reference is made to the addition of carbonate of soda to prevent milk from turning sour. Milk thus treated may be kept, it is said, for eight or ten days. Again, milk of almonds is referred to as being sometimes present in milk, and as oil of almonds is decidedly antiseptic, the object of its addition was probably for preserving purposes or as a corrective. This seems to be the first historic reference to the use of preservatives in milk.

The next reference to the use of a preservative was in connexion with the

### ADDITION OF SULPHURIC ACID TO VINEGAR.

THE LANCET Commission[1] regarded this addition as unnecessary, since some makers dispensed with it altogether. As a result of the inquiry it was shown that of 33 samples analysed eight samples contained a quantity of sulphuric acid not exceeding the amount permitted to be added, while in the remaining cases the amount exceeded this, and in some instances was three or four times as great.

The next inquiry (1852) related to

### PICKLES

and their adulteration, and here again the presence of free sulphuric acid was shown and of copper in varying amounts

[1] THE LANCET, Jan. 10th, 1852, p. 51

in the samples purchased. In two instances the amounts were poisonous. The pickles which contained the largest quantity of copper were those which consisted entirely of green vegetables, as gherkins and beans. "One of the worst features of this abominable practice," remark THE LANCET Commission, " is that the employment of copper is wholly unnecessary, as the colour of green vegetables may be very well preserved by other means, as by the use of pure vinegar and the addition of a proper quantity of salt."

The next important article dealt with

PRESERVED PROVISIONS

and appeared in THE LANCET of March 20th, 1852. In this article reference is made to the means of preserving various foods but the only preservatives mentioned are salt, sugar, oil, charcoal, acetic acid, pyroligneous acid, and alcohol. A number of samples were examined including carrots, turnips, peas, rhubarb, cabbage, Brussels sprouts, potatoes, apples, extract of beef, soups, fish, and beef pemmican. Out of the 34 samples of preserved provisions of all kinds submitted to examination the condition of preservation of 29 was most satisfactory, the state of five only out of the number being unsatisfactory, three of these being vegetables. It was concluded on the whole that the several processes adopted for the preservation of vegetable and animal substances so far as regards home and domestic use were productive of satisfactory results. From the few cases, however, which had turned out unfavourably, it was evident that the greatest care was requisite in conducting the several steps of whatever process was adopted.

The next report was devoted to the examination of

CAYENNE PEPPER

purchased at the establishments of grocers and oilmen resident in the metropolis, and the results were startling. Cinnabar, vermilion or sulphide of mercury was detected in one sample. Six of the samples consisted of a mixture of ground rice, turmeric, and cayenne, coloured with either red lead or a red ferruginous earth. Venetian red, red ochre, and brick-dust occurred in seven samples, red lead in poisonous quantities in 13 samples, while of the 28 examined 22 contained mineral colouring matter. Practically the same substances and colouring agents were found in

CURRIE POWDER,

the report, including the analysis of 26 samples, appearing in THE LANCET of July 17th, 1852.

The next Commission dealt with

PRESERVED BOTTLED FRUITS AND VEGETABLES.

Twenty-seven samples out of 33 contained varying quantities of copper. This was true for gooseberries, rhubarb, and greengages, but not for red fruits like currants, raspberries, and cherries. Several specimens of green fruits and vegetables were free from copper. Olives contained a very large amount of copper. The colour of green fruit and vegetables was, the Commission remarked, apparently heightened by a second device; the bottles in which they were enclosed were made of a highly-coloured glass; those in which French olives were preserved were of so intense a green as to impart to the fruit a deep green colour even without the aid of copper.

The next inquiry of interest to the Committee related to

ANCHOVIES,

in which red lead was occasionally found. In 23 out of 28 samples bole Armenian or Venetian red was found. Much the same class of colouring material was found in many samples of potted meats and fish, the report appearing in THE LANCET of Nov. 13th, 1852.

The next inquiry related to

SAUCES,

in which apparently in some instances charred deal wood was used for imparting colour. Cochineal and bole Armenian were found in essence of lobster, shrimps, and anchovies.

An interesting letter appeared in THE LANCET of Jan. 15th, 1853, from the late Dr. Bernays, lecturer on chemistry at that time in St. Thomas's Hospital. Referring to the work of THE LANCET Analytical Sanitary Commission, Dr. Bernays noticed that when eating

GOOSEBERRIES

with a steel fork the prongs became completely coated with a thin film of bright metallic copper.

PRESERVES AND JELLIES

were next the subject of inquiry, the results being recorded in THE LANCET of Jan. 22nd, 1853. Some 35 samples were examined. Raspberry jam, gooseberry jam, greengage jam, the greengages of crystallised fruit, limes and greengages, and candied citron peel, all owed their brilliant colour to a salt of copper.

The next subject forming the basis of a report was

LARD,

where the chief form of adulteration appeared to be caustic lime "to improve consistence and colour."

Later, in THE LANCET of June 4th, 1853, it was shown that

BUTTER

was heavily preserved with an excess of salt, but no other preservative was mentioned.

A pause appears to have occurred at this date in the work of the Commission, the next article appearing in THE LANCET of Dec. 3rd, 1853, which related to the analyses of 43 samples of

SNUFF.

In many instances red ochre, yellow ochre, and umber were found as colouring agents. Chromate of lead, oxide of lead, and bichromate of potash were found in other samples.

In the following year, in the issue of THE LANCET of May 27th, 1854, appeared a remarkable report on the

COLOUR USED IN CONFECTIONERY.

Yellow sweets were found coloured with chromate of lead and gamboge: red sweets were coloured with red lead, vermilion or sulphide of mercury; brown sweets were coloured with umber and sienna; purple sweets with Prussian blue and cochineal; blue sweets with indigo, Prussian blue, and ultramarine; green sweets with Brunswick green, a mixture of chromate of lead and Prussian blue; and others were coloured with carbonate of copper and Scheele's green or arsenite of copper. In cake ornaments white lead was frequently found. In this report several instances are given of poisoning by the consumption of articles so coloured.

With this terrible indictment the work of the Commission, as it relates to the subject of inquiry before the Committee on Preservatives, ceased until seven years later. In 1861 and 1865 THE LANCET Analytical Commission resumed its inquiry and on these occasions devoted its attention again to

PRESERVED PROVISIONS,

in which it was shown that copper was still employed to a very large extent in green preserved fruits and vegetables, although the samples obtained from big firms which are still well known were shown to be free from copper. Also it was shown that the gross forms of adulteration of

CAYENNE,

as with lead and mercury, had to a large extent subsided. At the same time it was also shown that

MUSTARD

was less adulterated and that turmeric as a colouring agent was the exception rather than the rule. There is a vast amount of further information in these reports bearing on the general adulteration of food up to that time. It would clearly appear that up to this date the present methods of preserving and colouring foods were unknown. That attempts were, however, very strenuously made to institute a satisfactory method for the preservation of food is abundantly clear from a perusal of THE LANCET from 1854 to 1886. Editorial articles appeared again and again as to the merit of certain processes, and analyses were quoted clearly emanating from THE LANCET Analytical Sanitary Commission, dealing with the products of these methods. It is interesting to quote one article which appeared in THE LANCET of Jan. 19th, 1867.

In this article the efforts that had been made towards

PRESERVING ANIMAL FOOD SUPPLIES

were described. Omitting to mention the methods of tinning meats in vacuo, we refer for the purposes of the present inquiry to the section of this article which deals with antiseptics. It would appear that sulphurous acid and the sulphites were tried, with the result that though to some extent the meat was preserved from putrefaction, yet the flavour of the meat so treated put the method out of court. The use of nitric oxide was also suggested. In summing up, THE LANCET writes: "It may be safely asserted that no method is known to science by which the decomposition of raw meat can be prevented, especially in tropical climates, without the employment of some powerful antiseptic which, in order to accomplish the object, must impregnate every part

of the meat and its juices. It may also be safely asserted that there are no known antiseptics capable of producing the required effect that would not either destroy the nutritive properties of the meat or communicate to it a decided flavour that would interfere with its use as a food. Salt is the only chemical agent that has been used with any good effect, but something better than salt meat is wanted." Here, again, there is no mention of the use of modern antiseptics such as borax or salicylic acid.

Apparently the first mention of a modern preservative in milk was in THE LANCET of Jan. 20th, 1877. The preservative was salicylic acid. Next in the issue of Jan. 11th, 1879, borax is mentioned as being used in meat. It is curious to note that the employment of modern antiseptics for the preservation of food was introduced much about the time when Lord Lister introduced his method of antiseptic treatment. Lord (then Mr.) Lister's discovery was announced in 1870, and in the following years the Listerian methods were adopted, with what remarkable results in the history of medicine every medical man knows.

In THE LANCET of April 10th, 1886, page 700, an editorial note appeared on the

INCREASING USE OF PRESERVATIVES IN FOOD.

Benzoate of soda appears then to have been regarded as the best agent. Boric acid is described as undesirable and injurious especially when present in milk for infant use. In another article which appeared on page 1142, Vol. ii., 1886, the results of the examination of

BORATED FISH

are reported. Here it is stated that apparently boric acid is not truly a preservative, and that blackening of the flesh was noticeable.

In several articles which appeared in the second volume of THE LANCET of 1887, the increasing use of

BORIC ACID IN MILK

was pointed out and appeal was made for attention to the subject. One of these articles was the translation of Dr. Forster's report in *Dingler's Polytechnisches Journal*, 1884, page 170, on the use of boric acid as a so-called food preservative. This will be found to be a very interesting physiological inquiry, which would appear to have anticipated modern experiments. The result was distinctly unfavourable to the use of boric acid. The publication of this article in the columns of THE LANCET led to what must be regarded as the first public agitation on the subject. It received considerable comment at the hands of the public analysts, which culminated in the

FIRST CASE OF PROSECUTION

instituted under the Sale of Food Acts. The case failed on the point of an added and, as it was urged, injurious preservative, but succeeded on the point of abstraction of fat.

In a leading article in THE LANCET of Jan. 10th, 1891, in commenting upon this case THE LANCET remarked that the "question is an important one and calls for immediate investigation, and the consensus of medical opinion must be gained." This is exactly the present position and a position which the Committee are appointed to elucidate. As to the evidence of the use of preservatives and colouring matters in food following the date of this remark (Jan. 10th, 1891) up to the present time particulars have already been furnished to the Committee by medical men, public analysts, and others.

THE LANCET Laboratory.

## THE PRINCE OF WALES'S HOSPITAL FUND FOR LONDON.

THE following is a list of the grants recommended by the Distribution Committee :—

Alexandra Hospital—Donation, £500. Belgrave Hospital—Donation, £500 (to help the hospital to remove to the South of London). Bolingbroke Hospital—Donation, £1000 (towards the rebuilding). British Lying-in Hospital—Donation, £100. Cancer Hospital (the committee consider this to be a well-managed hospital but not in need of a grant this year). Central London Ophthalmic Hospital—Donation, £100 (towards the rebuilding). Central London Throat and Ear Hospital—Donation £150 (towards an operating room). Charing-cross Hospital—Annual, £1000 (in the hope that the improvements required will be put in hand forthwith). Chelsea Hospital for Women—Donation, £250. Cheyne Hospital—Donation, £100 (in consideration of the fact that curable cases are admitted). City of London Chest Hospital—Annual, £1500 (grant is increased by £500 to enable the re-opening of another ward of 10 beds). City Orthopædic Hospital—Annual, £250 (the amount named by the authorities as required to open the remaining 20 closed beds). Clapham Maternity Hospital—Donation, £250 (towards the building fund). Cottage Hospital, Canning Town—Donation, £100 (towards the building fund). Dental Hospital—Donation, £100. "Dreadnought" Hospital—Annual, £500; donation, £200 (£500 annual as before, £200 for the Tropical Diseases Department). East-End Mothers' Home (the income of this institution appears this year to be sufficient). East London Hospital—Donation, £250. Establishment for Gentlewomen—Donation, £75. Evelina Hospital (no grant is recommended as the income appears to be sufficient this year). French Hospital—Donation, £100. Gordon Fistula Hospital—Donation, £100 (towards furnishing). Great Northern Central Hospital—Annual, £750 (as before). Grosvenor Hospital—Donation, £100. Guy's Hospital—Annual, £5000. Hampstead Hospital—Donation, £100 (towards the salary of a house surgeon). Hospital and Home for Incurables, Maida Vale (an institution for incurables only). Hospital for Diseases of the Throat (their claim to be considered another year when their building is completed). Hospital for Epilepsy and Paralysis—Donation, £250 (for rebuilding). Hospital for Sick Children—Annual, £500. Hospital for Women, Soho-square—Donation, £350. Hospital of St. John and St. Elizabeth (no grant is recommended this year. Their case to be considered after the building is opened). Infirmary for Consumption (not considered to be within the scope of this fund as a hospital). Italian Hospital—Donation, £100 (towards furnishing the new building). King's College Hospital—Annual, £1000; donation, £175 (£1000 annual, £175 towards out-patients' department). London Fever Hospital—Donation, £200 (attention to be drawn to the necessity for certain reconstructions). London Homœopathic Hospital—Donation, £200. London Hospital—Annual, £5000. London Lock Hospital—Donation, £500. London Temperance Hospital—Donation, £600. Memorial Cottage Hospital—Donation, £50. Metropolitan Hospital—Donation, £1000 (committee trust that the efforts of the authorities will be continued successfully and the debt paid off with the assistance and encouragement shown in this increased grant). Middlesex Hospital—Annual, £1000 (as before). Mildmay Mission Hospital, Donation, £250. Miller Hospital—Donation, £300. National Hospital for Paralysed—Annual, £750. National Orthopædic Hospital—Donation, £100. New Hospital for Women—Donation, £100 (towards the purposes named by the visitors). North-Eastern Hospital for Children—Annual, £500; donation, £250 (£500 annual, £250 towards building). North London Hospital for Consumption—Annual, £1000. North-West London Hospital—Donation, £500. Paddington-green Hospital—Donation, £150. Poplar Hospital (an admirably conducted institution, but does not seem to require help this year). Queen Charlotte's Hospital—Donation £300. Queen's Jubilee Hospital (this institution does not appear to be a hospital in any true sense of the word, and its buildings are quite unsuitable for hospital purposes). Royal Ear Hospital (their claim to be considered when the removal is completed). Royal Eye Hospital—Donation, £100. Royal Free Hospital—Annual, £750; donation, £500 (of which £750 is annual, and £500 a donation towards improving the accommodation for nurses). Royal Hospital for Women and Children—Donation, £100 (the committee desire to draw attention to the need for rebuilding). Royal Hospital for Diseases of the Chest, City-road—Donation, £250 (towards improving the nurses' accommodation). Royal London Ophthalmic Hospital—Donation £750. Royal Orthopædic Hospital—Donation, £250 (towards the expense of rebuilding the hospital on a new site). Royal Westminster Ophthalmic Hospital (no grant this year). Samaritan Free Hospital—Annual £500. St. George's Hospital (although in view of the financial position of the hospital the committee are unable to recommend a grant they cannot but express their unqualified approbation of the excellent work that has been done in the way of improving the nursing accommodation and reconstructing the theatre). St. Mark's Hospital (the committee consider that the financial position does not seem to require help this year). St. Mary's Children's Hospital, Plaistow—Donation, £500 (£200 for maintenance, £300 towards the improvements named by the visitors). St. Mary's Hospital, Paddington—Annual, £1000. St. Monica's Hospital—Donation, £50 (the committee desire to draw attention to the fact that there is no isolation ward). St. Peter's Hospital for Stone—Donation, £50. St. Saviour's Hospital—Donation, £50. St. Thomas's Hospital—Annual, £1800 (the committee consider that an inquiry officer is needed to prevent abuse by out-patients). Tottenham Hospital—Annual, £1000; donation, £500 (£1000 of this is annual towards the opening of one closed ward containing about 15 beds; £500 donation). University College Hospital—Annual, £1400 (as before). Victoria Hospital for Sick Children—Donation, £500 (towards the new building. The committee recommend, in view of the fact that the new building is to cover all the available garden space belonging to the hospital, that a flat roof should be made on the new building for air and exercise). West-End Hospital for Diseases of the Nervous System—Donation, £100 (towards a new operating room). Western Ophthalmic Hospital—Donation, £50. West Ham Hospital—Annual, £300; donation, £250 (£300 annual grant, £250 towards repairs and alterations necessary). West London Hospital—Donation, £1000 (the authorities having agreed to carry out the recommendations of the visitors). Westminster Hospital—Annual, £750; donation, £250 (£750 annual, £250 towards the cost of nurses' quarters). Wimbledon Hospital—Donation, £50. Total annual grants, £26,250; total donations, £14,750.

SOUTH DEVON AND EAST CORNWALL HOSPITAL.—Hospital Saturday, recently held in Plymouth, has resulted in the sum of £601 being raised for the funds of this institution. The Sunday Schools Collection, in aid of the Children's Ward, realised £64.

PAUPERISM IN THE CHARD UNION.—Mr. Preston Thomas, the Local Government Board inspector for the south-western counties, has drawn the attention of the Chard Board of Guardians to the fact that the rate of pauperism in their union is no less than 44 per 1000, whereas the rate throughout England and Wales is only 26 per 1000.

# THE LANCET RELIEF FUND.

## ELEVENTH ANNUAL REPORT OF THE ALMONERS.

THE LANCET Relief Fund, which has for its Almoners the President of the Royal College of Physicians of London (Sir SAMUEL WILKS, Bart., F.R.S., during the first three months of last year and subsequently Dr. WILLIAM SELBY CHURCH), the President of the Royal College of Surgeons of England (Sir WILLIAM MAC CORMAC, Bart., K.C.V.O.), the President of the General Medical Council (Sir WILLIAM TURNER, M.B. Lond., F.R.C.S. Eng. and Edin., F.R.S.), Mr. THOMAS WAKLEY, F.R.C.S. Eng., and Mr. THOMAS WAKLEY, jun., L.R.C.P. Lond., with Sir HENRY PITMAN, M.D. Cantab., F.R.C.P. Lond., as Honorary Auditor, came into operation on the 1st of February, 1889.

In presenting the eleventh annual report the Almoners think it well again to direct attention to the object for which the Fund was established.

The Fund is sustained solely by the Proprietors of THE LANCET who provide every January the sum of at least £300 and is administered free of cost, with the object of affording immediate pecuniary assistance to registered medical practitioners or to the widows and orphans of members of the profession in cases of distress and emergency, by the grant of money by way of loans free of interest, or gifts, as the circumstances of the various cases may require.

When the Fund was inaugurated considerable misapprehension existed as to the precise objects for which it had been established; and as a result the majority of the earlier applications, being cases of *chronic* distress, and not coming, therefore, under the designation of *emergency*, could not be entertained. Attention was called to this fact in THE LANCET of Feb. 16th, 1889, in the following words:—

"We are requested by the Almoners to state that, from the character of a number of the applications received, both personally and by letter, for relief, it is evident that in many cases the object for which this Fund has been established is not quite clearly understood; and if relief had been afforded in the cases of those who suffer from chronic distress the Fund would have been completely exhausted within the first few days of its existence. They would therefore be greatly obliged if those readers of THE LANCET who may be asked to endorse applications would carefully peruse the Application Form and explain the precise object of the Fund to those applicants whose cases do not seem to come within the scope of the purpose for which the Fund has been established, which is to afford prompt aid to registered medical practitioners, or to the widows or orphans of members of the profession, who, in consequence of the supervention of some unexpected emergency, which is not likely to recur, have pressing need of immediate and temporary pecuniary relief"—and who, it may once more be pointed out, are likely to be permanently benefited thereby.

The balance in hand at the end of 1898 amounted to the sum of £318 5*s.* 8*d.* On Jan. 2nd, 1899, the Proprietors of THE LANCET placed to the credit of the Fund the sum of £300. The sum of £255 has been granted in relief either by way of loan or of gift, leaving a balance of £358 1*s.* 6*d.* as per Statement of Accounts.

There have been considered altogether during the 12 months ending Dec. 31st, 1899, 33 applications for relief (the number the previous year having also been 33). In 24 cases assistance was awarded either as a loan or as a gift according to the request of the applicant, the amounts of the grants ranging this year from £5 to £20.

The Almoners are glad to find from the number of letters received from recipients of the Fund that it continues to be of service to unfortunate members of the profession and that the particular object of assisting cases of emergency and immediate distress has been attained.

(Signed)

WILLIAM TURNER. SAMUEL WILKS.
W. S. CHURCH. THOMAS WAKLEY.
THOMAS WAKLEY, JUN.

Owing to his absence in South Africa Sir WILLIAM MAC CORMAC was unable to sign the Report.

*Statement of Accounts for the Year ending Dec. 31st, 1899.*

DR.

| | £ | s. | d. |
|---|---|---|---|
| To Balance at the London and Westminster Bank, Limited (Westminster Branch), Jan. 1st, 1899 ... ... | 318 | 5 | 8 |
| Proprietors of THE LANCET, Jan. 2nd, 1899 ... | 300 | 0 | 0 |
| | 618 | 5 | 8 |
| To Balance at Bank ... ... ... ... | £358 | 1 | 6 |

CR.

| | £ | s. | d. | £ | s. | d. |
|---|---|---|---|---|---|---|
| By Loans:— | | | | | | |
| Case No. 427 ... ... ... | 10 | 0 | 0 | | | |
| | | | | 10 | 0 | 0 |
| „ Cheque outstanding Dec. 31st, 1898 Case No. 414 ... ... ... ... | | | | 5 | 0 | 0 |
| By Gifts:— | | | | | | |
| Case No. 416 ... ... ... | 10 | 0 | 0 | | | |
| „ 420 ... ... ... | 10 | 0 | 0 | | | |
| „ 423 ... ... ... | 10 | 0 | 0 | | | |
| „ 424 ... ... ... | 10 | 0 | 0 | | | |
| „ 425 ... ... ... | 10 | 0 | 0 | | | |
| „ 428 ... ... ... | 10 | 0 | 0 | | | |
| „ 429 ... ... ... | 5 | 0 | 0 | | | |
| „ 430 ... ... ... | 5 | 0 | 0 | | | |
| „ 432 ... ... ... | 20 | 0 | 0 | | | |
| „ 433 ... ... ... | 15 | 0 | 0 | | | |
| „ 435 ... ... ... | 20 | 0 | 0 | | | |
| „ 436 ... ... ... | 5 | 0 | 0 | | | |
| „ 437 ... ... ... | 5 | 0 | 0 | | | |
| „ 438 ... ... ... | 5 | 0 | 0 | | | |
| „ 439 ... ... ... | 5 | 0 | 0 | | | |
| „ 441 ... ... ... | 15 | 0 | 0 | | | |
| „ 443 ... ... ... | 5 | 0 | 0 | | | |
| „ 443 ... ... ... | 15 | 0 | 0 | | | |
| „ 444 ... ... ... | 15 | 0 | 0 | | | |
| „ 445 ... ... ... | 20 | 0 | 0 | | | |
| „ 446 ... ... ... | 10 | 0 | 0 | | | |
| „ 447 ... ... ... | 10 | 0 | 0 | | | |
| „ 448 ... ... ... | 10 | 0 | 0 | | | |
| | | | | 245 | 0 | 0 |
| „ Cheque Book ... ... ... | ... | ... | ... | 0 | 4 | 2 |
| „ Balance at Bank ... ... ... | ... | ... | ... | 358 | 1 | 6 |
| | | | | £618 | 5 | 8 |

I find by the Bankers' Book that the actual balance on Jan. 1st, 1899, to the credit of the Fund was £318 5*s.* 8*d.*, to which the sum of £300 was added by the Proprietors of THE LANCET on Jan. 2nd, 1899.

The balance at the Bank at the present date is the sum of £358 1*s.* 6*d.* I have also checked the receipts for disbursements and find the above account strictly accurate.

December 29th, 1899.

HENRY A. PITMAN, Hon. Auditor.

# Obituary.

## SIR JAMES PAGET, BART., F.R.C.S. ENG., F.R.S., D.C.L. OXON., LL.D. CANTAB., &c.

IT is with deep regret that we announce the death of Sir James Paget, which took place at his residence, 5, Park-square West, Regent's-park, on Dec. 30th, 1899. He was in his eighty-fifth year and had been ailing for some two years past. On Christmas Day he went out for a drive, but since then had been confined to the house. All his family were in attendance, and at 10 o'clock on Saturday night he quietly passed away.

James Paget was the eighth child of Mr. Samuel Paget of Great Yarmouth and Sarah Elizabeth his wife, daughter of Mr. Thomas Tolver, of Chester, and was born in 1814. He was educated at a private school at Yarmouth. When quite young he was apprenticed to Mr. Costerton, a surgeon in practice in Great Yarmouth, and subsequently he entered as a student at St. Bartholomew's Hospital, where he studied under Stanley, Earle, Lawrence, and Vincent, who were full surgeons, while Wormald and Skey were assistant surgeons. Lawrence and Stanley both held him from the first in the highest esteem and assisted him in many ways. He became a Member of the Royal College of Surgeons of England in 1836, but it was as a first or second year's student that he discovered the trichina spiralis in the muscles of a subject in the dissecting room, his attention being attracted by finding small calcareous granules in the muscles. On pointing this out to Mr. Wormald, who was then demonstrator, the latter sent some specimens to Owen, professor of Comparative Anatomy at the hospital and assistant curator of the museum at the College, with the following note, dated Feb. 3rd, 1835:—

> DEAR OWEN,—I send you some sort of organised being, as I believe, which occupies the muscles of a subject under dissection at St. B. H., and as I know you are a keen hand for parasitical things, from "crabs" downwards, I send the enclosed for your inspection.
>
> Ever yours sincerely,
>
> THOS. WORMALD.

On examining the cysts under a microscope Owen at once discovered the "worm," which he named trichina spiralis. But in the meantime Paget, who had no microscope of his own, at length managed to get the use of one from Mr. Robert Brown of the British Museum, and he confirmed a previous conclusion he had come to by means of using a pocket lens—namely, that the cysts did contain worms. On Feb. 6th, 1835, he read a paper on the subject before the Abernethian Society, Dr. Arthur Farre being in the chair. It was not until some days after this (Feb. 24th) that Owen, who had in the meantime accurately described and classified the worm, read his paper before the Zoological Society, and in this paper, with that transparent sense of honour and justice so characteristic of the man, he gave full credit to the then unknown and undistinguished student for priority of discovery. Paget's own description was, to use his own words in a letter to THE LANCET of March 10th, 1866, "not indeed complete—but I believe not inaccurate, except in a blundering endeavour to assign its zoological relations." So to Paget belongs the credit of having been the first to see the worm, though Hilton of Guy's Hospital had some time before this suggested that "the specks probably depended upon the formation of very small cysticerci." Owen's discovery was made quite independently.[1]

Sir James Paget's career as an active member of the staff of St. Bartholomew's Hospital lasted for twenty-eight years—namely, from May 30th, 1843, when he was appointed lecturer on general anatomy and physiology, to May 11th, 1871, when he resigned the office of surgeon and was appointed honorary consulting surgeon. On Oct. 2nd, 1843, he was appointed warden of the Hospital College, an important and, to one like Paget with a high ideal of duty, a most responsible post. In the following year he married Lydia, daughter of the Rev. Henry North, domestic chaplain to H.R.H. the Duke of Kent, and he and his wife lived in the College rooms, which cannot be called palatial even now, and were most probably worse fifty years ago. In these early days he was very poor, and he eked out his scanty income by writing articles in the "Penny Cyclopædia." Following out his own maxim, "A man must work within an inch of his life," he had no real holiday for seventeen years, was rarely in bed before 2 A.M. and rose at 7.30 A.M. In 1846 he was asked to report upon the anatomical museum as curator, and the result of this report was the first volume of the catalogue. For this he was presented by the Governors with the sum of 150 guineas. On Feb. 11th in that year he was admitted as a candidate for the office of assistant-surgeon, and on Feb. 24th was elected to that office, not without strong opposition, for he had never been apprenticed to any one of the surgeons, neither had he been house surgeon, and it was mainly owing to the help and support which he received from Sir William Lawrence that he succeeded. The figures were as follows: Mr. Paget, 142 votes; Mr. McWhinnie, 78; Mr. Pennington, 22. At about this date Mr. Stanley, who had seen and admired Paget's work as curator of the hospital museum, recommended him for a similar post at the Royal College of Surgeons of England in the department of pathology, and it was due to the experience gained at this post that Paget was able to write his unrivalled lectures on surgical pathology. He had been elected a Fellow of the College in 1843. From 1847 to 1852 he also held the post of Arris and Gale professor of human anatomy and surgery. To return to his hospital work: in 1851 he resigned the office of warden, and in 1859 the lectureship on general anatomy and physiology; in 1861 he was elected full surgeon, and in 1865 he was appointed lecturer on surgery, a post which he held until 1869. In 1865, too, he was elected as a member of the Council of the Royal College of Surgeons of England, a post which he continued to hold for ten years, until in 1875 he was elected to the office of President. In the following year he was chosen as a representative of the College upon the General Medical Council, an office which he continued to hold until 1881. On resigning the post of surgeon to St. Bartholomew's Hospital he was at once elected consulting surgeon, a copy of the resolution of the Court of Governors being presented to him by H.R.H. the Prince of Wales, President of the hospital. In 1877 he delivered the Hunterian Oration, the Prince of Wales being among his auditors. The subject was, "The Life and Teachings of John Hunter." As year after year the time for the Hunterian Oration comes round it is increasingly difficult for the selected speakers to find anything new to say, but Paget always had the faculty of being able to throw fresh light upon a subject, and to make matter however well worn interesting by his charm of style and diction. The concluding sentence of the oration is worthy of Thackeray: "His true thoughts still live in us, and they will live beyond us, never ceasing to urge and help men onwards in the pursuit of truth, for in the world of mind he that is mortal may produce that which may have immortality." In 1882 he delivered the Bradshaw Lecture, taking as his subject "Rare Diseases"; in 1885 he was elected a trustee of the Hunterian collection; and in 1887 he was appointed Morton lecturer on Cancer and Cancerous Diseases. We have already traced his career as an active member of the staff of St. Bartholomew's Hospital, and have mentioned the paper read while he was still a student upon the trichina spiralis before the Abernethian Society; nearly sixty years later he delivered the address upon the occasion of the centenary of that society—namely, in 1894.

As the circumstances which led to Paget's resignation formed the subject of one of his most interesting lectures it will be well to recapitulate them. Early in the year 1871 he contracted blood-poisoning, to all appearance through the unbroken skin, during the performance of a post-mortem examination. The result of this was a diffuse cellulitis affecting the right hand, arm, shoulder, and back. For many weeks he lay between life and death, but finally, owing to a good constitution and the assiduous attention of nearly the whole staff of the hospital, he recovered, though the attack permanently weakened his powers of resistance. Feeling unable to continue to do justice to the work of surgeon he resigned—a resignation accepted with great regret by the committee, and on July 4th, 1871, H.R.H. the Prince of Wales, as President of the hospital, presented him with an illuminated address embodying a resolution of the Court of Governors expressive of their sincere regret at his resignation and their unanimous thanks for his long and valuable services. He received a baronetcy in the same year.

Of his writings it is necessary to do little more than

[1] THE LANCET, Nov. 18th, 1882, p. 869, *et seq.*

Very truly yours
James Paget

mention their names, for they are known throughout the scientific world as models of what scientific papers should be. Clear, accurate, and sound in every respect, they are also written in a style which makes them most pleasurable reading and which at the same time impresses the subject firmly on the memory. His earliest work in this direction was the paper upon the trichina spiralis read before the Abernethian Society in 1835. In 1846 and 1851 appeared respectively the first and second volumes of the catalogue of the museum of St. Bartholomew's Hospital. In 1849 he published "Lectures on the Processes of Repair and Reproduction after Injuries," in 1850 "Lectures on Inflammation," in 1851 "Lectures on Tumours," and in 1853 his great work "Lectures on Surgical Pathology," material for which he had gathered together during his tenure of the post of curator of the Museum of the Royal College of Surgeons of England and Arris and Gale lecturer. To the first edition of Holmes's "System of Surgery" Paget contributed articles on Sinus and Fistula, Ulcers, Tumours, Contusions, and Wounds. In 1875 was issued a volume edited by Mr. Howard Marsh entitled "Clinical Lectures and Essays," being for the most part reprints of papers contributed to THE LANCET or read before societies. Besides these there were numerous addresses delivered at the hospital and elsewhere.

It is no easy matter to attempt to appraise at its correct value the contribution which Sir James Paget has made to our knowledge of surgery, and especially of surgical pathology, and this is so, not because anyone who is conversant with the work he did can be in any doubt as to its great importance, but because he is responsible for so much which has become part and parcel of our knowledge of surgical pathology. He was pre-eminently a clinical pathologist, for he united in himself the pathological knowledge, derived from his work in the museums of St. Bartholomew's Hospital and the Royal College of Surgeons of England, with the experience of a practising surgeon; and at a time when the general introduction of the use of the microscope into the examination of morbid tissues and products was leading to an over-estimate of the value of structural details Paget saw clearly that the mode of life of a tissue was as essential a part of its being as was the arrangement of its constituent fibres and cells, so in his "Lectures on Surgical Pathology" he wrote: "The examination of any texture, morbid or healthy, cannot be regarded as complete if it is limited to a mere determination of its form, appearance, and structure. Its growth, development, tendencies, influences upon the individual in whom it occurs, in short its life, must be attended to. Its teleological as well as its morphological aspects are to be considered." The same closeness of observation and scientific curiosity which prompted the young student of anatomy to investigate more closely the minute calcareous nodules which he saw in a muscle made the surgeon examine carefully all the cases which came to him for treatment. An excellent memory and assiduous note-taking enabled him to compare one case with another and to put like with like, and thus he recognised as definite diseases morbid conditions which had doubtlessly been seen many times and yet had been passed over unheeded by others. Paget it was who first described the fine soft appearance of the skin which is liable to follow an injury of a sensory nerve, and the phrase "glossy skin" which he applied to it is now the most usual name for this fully-recognised characteristic of a nerve lesion. He had a faculty of happily naming, and the name "myeloid" which he applied to giant-celled new growths has completely displaced their former appellations, though he was not the first to describe these tumours. There are several instances of the fruits of this happy combination of a skilled pathologist practising as a surgeon, but perhaps the most interesting is the account he gave of "recurrent fibroids"; those who are familiar—and what surgeon is not—with the account he has given in his lectures on surgical pathology of the tumour to which he applied this name will acknowledge that no better description could be given of this important variety of tumour now classed among the sarcomata. There are, however, two morbid conditions with which Paget's name is most closely connected, and it is to his account of these diseases that the lasting remembrance of his name will be most surely due. The phrase "Paget's disease" is equally applicable to the disease of the nipple, now often called "malignant dermatitis," and to that affection of the bones to which he applied the name of "osteitis deformans." The account of the disease of the nipple first appeared in 1874, and confirmatory evidence of the truth of the description and of the tendency to result in carcinoma, was soon supplied by others. In 1877 he read a paper before the Royal Medical and Chirurgical Society on "Osteitis deformans," and although our knowlege of the disease has, of course, increased the accuracy of the account has not been surpassed. We cannot but think that a valuable lesson may be learned from Paget's professional life: the fuller the knowledge of pathology which a surgeon possesses the more fitted will he be for his work as a surgeon, and if this was true of the earlier part of this century it is even more true now.

The well-known Handbook of Physiology which was given to the world under Kirkes's name was mainly by Paget. It was the outcome of the courses of lectures on physiology which he delivered in the medical school of St. Bartholomew's Hospital from 1844 to 1848. So far as is now known he handed over his "notes," which were in fact the whole section for the day's lecture carefully written out, to Kirkes, giving him the credit of editing and publishing the work. His name appears on the title page of the 1848 edition as "assisting" Kirkes and his notes are acknowledged in the preface. Kirkes, of course, made additions of his own and brought the work up to date. Sir James Paget's last publication was the "Echoes from Old Case Books," which, although published in 1891, dealt with his surgical experience only up to 1870, when from want of leisure his case books had in great part to be given up. He was more interested in pathology than he ever was in physiology, and he used to collect specimens from the post-mortem room during the first five days of the week and give a most interesting lecture on the Saturday. The lecture room was always full, but on Saturday morning at 9 A.M. it was crowded, and the interest taken in the "Pathology" lecture was very great.

Paget was for many years one of the best—if not the best—speaker in the profession, and a friendly rivalry upon this matter was maintained between himself and his colleague, the late Sir William Savory. Both were admirable speakers, both took the greatest pride in their art, and both took infinite pains with their speeches and addresses, even going so far in some instances as to learn them by heart. Both were able to speak for an hour or so without hesitating or ever using any but the word most fitting for its particular place. But despite the similarity in preparation the delivery of the two was markedly different. Savory gave the hearer the effect that he was listening, as he was, to a prodigious *tour de force* of memory—in other words, the listener felt that the speaker had learned his speech beforehand. With Paget, although the speech or address had most likely been written out two or three times and learned by heart, when he came to deliver it it appeared as though he were speaking just as the words came into his head—although he never showed any really rhetorical force, but the speech flowed on in an even stream of musical and well-balanced sentences. He could speak without preparation, however, and was most ready in either proposing, or responding to, a toast.

As a surgeon he was a very keen observer and one who took unbounded trouble, and his opinion was most valuable, especially in rare cases, for he saw a large number of them and never forgot what he had seen. As to personal characteristics he was strongly and deeply religious in the best sense of the word, and would have been a great theologian if he had not taken up a different line of thought. In 1880, at the invitation of his son, the present Vicar of St. Pancras, but then Principal of the Clergy School at Leeds, he delivered an address at the Leeds Theological College to the candidates for ordination. Taking for his subject Theology and Science, he laid down and supported the thesis that the more a man knew of science the more was it possible to reconcile its facts with religion. To a natural capacity for work he added habits of exactitude and punctuality in all that he did, thereby increasing his opportunities for doing work. He was careful and frugal with absolutely no ostentation, and he never shirked public duties or tried to save himself; thus when very busy with a large practice he was President of the Royal Medical and Chirurgical Society and of the Clinical Society of London, as well as of the Royal College of Surgeons of England, resembling in this respect the late Sir A. Clark and the late Sir W. Jenner.

As a consultant Sir James Paget made a great point of being punctual, and he was very rarely more than two or three minutes late. This, like so much else that he did, was largely owing to his sense of duty. What he had undertaken

that would he do, at whatever cost. It was, however, due in part to his personal modesty. His view was that he had no right to keep either a patient or a practitioner waiting. But it was also partly due to the fact that he was well aware that punctuality was a great economy, not only of other people's time, but of his own as well. However pressed he might be he never evinced hurry, but seemed entirely at the disposal of his patient. Yet there was some art here. For by his earnestness and his power of leading he quickly made his way to a clear issue, and established the impression that all had been well considered and determined upon, and thus talk which was useless and a waste of time naturally died away. His charm of manner, all who knew him will agree, was as telling in the sick-room as elsewhere. His voice was clear and musical; he spoke distinctly, and in pure and strong English, and always with a frank and sympathetic kindness which inspired confidence and grateful recognition.

Towards the practitioner in the case he was always in the highest degree considerate and courteous, and though it was well known to everyone that he was the first surgeon of his time and a man of European reputation he seemed himself entirely unconscious of the fact. In the early days of his practice his opinion was anything but a strong one. He had never been house surgeon and had been occupied chiefly with physiology and pathology. Yet he rapidly advanced, for he was aware of defects which were unknown to others and he was intently observant. Thus he never repeated a mistake and always appropriated any information that came within his reach and kept it fresh and ready for the next occasion. Later he stood by common consent without a rival, for he was himself the fountain of knowledge in many fields of pathology. Such subjects as inflammation, diseases of bones, and malignant growths he had made peculiarly his own, and he had made his mark by original observations in the field of surgery as a pioneer in the study of injuries of nerves, chronic pyæmia, senile scrofula, osteitis deformans, &c., and he possessed in a very rare degree the faculty of estimating the relative value of the facts which presented themselves and of arranging and balancing evidence so as to arrive at a sound conclusion. He was often right when others were wrong, either because his knowledge was altogether superior or because he saw what others had overlooked. At the present day the tendency often is to study merely the processes of disease and to ignore the characteristics of the patient in whom the disease is at work. In this connexion a useful lesson might be learnt from Sir James Paget, who, while he carefully noted every feature in the malady, regarded the patient himself as an important factor from the point of view alike of diagnosis and treatment.

His honours and appointments were many and varied and though we have mentioned most of them we may fitly recapitulate them here. Besides the posts held at St. Bartholomew's Hospital, which we have already mentioned, he was consulting surgeon to Christ's Hospital. At the Royal College of Surgeons of England he was elected a Fellow in 1843, a member of the Council in 1865, and President in 1875. He was never an examiner for the College although he filled that office for some time on the Army Medical Board. He was Serjeant-Surgeon to the Queen from 1877, surgeon to the Prince of Wales from 1863, and a Corresponding Member of the Institute of France. In 1871 he was created a baronet, and was Vice-Chancellor of the University of London from 1884 to 1895

Possibly the greatest honour in a scientific sense which fell to Paget's lot during his long and noble term of life was his being chosen as President of the International Medical Congress which met in London in August, 1881. His presidential address will never be forgotten by those who heard it, and it stands out pre-eminently even in the company of the magnificent addresses of such speakers as Virchow and Huxley, Michael Foster and Gull. Can there be a more eloquent call to arms for us who are left than these words of him so lately passed away? "And then let us always remind ourselves of the nobility of our calling. . . . . We had better not compete when wealth is the highest evidence of success; we can compete with the world in the nobler ambition of being counted among the learned and the good who strive to make the future better and happier than the past. And to this we shall attain if we remind ourselves that, as in every pursuit of knowledge there is the charm of novelty and in every attainment of truth utility, so in every use of it there may be that . . I do not mean only the charity which is in hospitals or in the service of the poor, great as is the privilege of our calling in that we may be its chief ministers, but that wider charity which is practised in a constant sympathy and gentleness, in patience and self-devotion. And it is surely fair to hold that, as in every search for knowledge we may strengthen our intellectual power, so in every practical employment of it we may, if we will, improve our moral nature; we may obey the whole law of Christian love, we may illustrate the highest induction of scientific philanthropy."

These words are eminently characteristic of him who uttered them—nobleness and gentleness were part of his being. In no way narrow or bigoted, he was great-souled, honest, and upright, with a reverence for truth and a hatred for shams or deceit of any kind. Yet he was never wanting in tact and had a wonderful faculty for telling the truth without hurting people's feelings. In the guest room of an ancient Spanish monastery hangs a notice to the effect that the Abbot trusts that anyone who shall come there will behave himself as a gentleman and a Christian. Paget was a shining example of both, this world is the poorer by his passing, but his memory will ever remain to inspire us who are left with courage in our daily work and with sympathy for those who fall by the way.

The first part of the burial service for the late Sir James Paget took place on Thursday, Jan. 4th, in Westminster Abbey, at 2 P.M. The body was afterwards conveyed to Finchley Cemetery for interment. Dr. W. S. Church, President of the Royal College of Physicians of London, was unavoidably absent through illness, and the College was represented by Dr. Pye-Smith, Senior Censor.

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### HENRY THOMPSON, M.R.C.S. ENG., L.R.C.P. LOND.,

SURGEON TO THE HULL ROYAL INFIRMARY

**MUCH regret has been occasioned among the many friends of Mr. Henry Thompson by the announcement of his death after a short illness, at the age of 49 years. Mr. Thompson, who began his professional life as a pupil of Sir Robert Craven, was afterwards a student at St. Bartholomew's Hospital, where he held the office of house physician and took several prizes. Becoming M.R.C.S. Eng. in 1871 and L.R.C.P. Lond. in 1874, he was shortly afterwards elected house surgeon to the Hull Royal Infirmary, and assisted the late Dr. Kelburne King in carrying out the antiseptic method of Professor Lister just then introduced. In 1876 he was appointed honorary assistant surgeon, and in 1886 honorary surgeon to the infirmary, continuing in office to the time of his death. He was also surgeon to the 1st Volunteer Battalion East Yorks Regiment for 20 years, receiving on his retirement promotion to the rank of Surgeon Lieutenant-Colonel, and had been president of the East York and North Lincoln Branch of the British Medical Association. Through his whole career Mr. Thompson was noted for conscientious and strict devotion to his profession, of which he was an exceedingly able and successful practitioner. His ability and uprightness also won for him the respect and esteem of his professional brethren, by whom, as well as by his patients, the loss is much felt. He leaves a widow and large family, the eldest son having only just entered as a student at the Middlesex Hospital.**

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## THE WAR IN SOUTH AFRICA.

**SINCE we last wrote on this subject there have been some successes on the British side, but not of such a decisive or important kind as materially to affect the result. At present there is a war lull. The campaign in South Africa, besides causing us to raise the eyebrows of astonishment, as the Germans say, at the resources and preparedness of the Boers, has taught us and the world at large some useful and important lessons. It shows, to begin with, the enormous strength of even a small, but determined, nation or race in defensive warfare when armed with the most modern weapons and fighting on its own particular methods. Our checks and reverses in South Africa are a valuable object-lesson. The thought will at once occur how extremely difficult, even assuming our fleet to be disabled, would be an invasion of this country and how difficult, too, would it be for an**

invading army, after succeeding in effecting a landing, to get away again, if our adult population were only properly armed and organised and our land defences in an effective condition. The salient features of the present war in South Africa are noteworthy. The Boers knew their own mind, they had long foreseen what would happen, and they were prepared for it; they armed themselves with all the latest and most destructive engines of war and they adopted a new system of tactics singularly well adapted to their purposes, the country, and the nature and circumstances of the campaign; whereas our undecided and vacillating policy and our ignorance of their carefully planned designs and preparations greatly tended to aid and facilitate the Boers in carrying them out. Moreover, the huge area of the theatre of war, in a disaffected if not hostile country, thousands of miles distant from us, the extreme weakness of the British garrison in South Africa at the time of the ultimatum, and the comparative absence of any adequate land transport when the reinforcements arrived there, compelling us to hug the railways—these were all strong points which were eminently favourable to the initial success of the Boer rebellion. No doubt political and military blunders may have been committed, and the difficulties and formidable nature of our undertaking in South Africa have evidently been underestimated, but we very much question whether the army of any other nation would not have passed through a very similar experience under the same circumstances or would have fared much better than we have done. It is certain that no other Power in the world could have successfully transported in a similar space of time and under similar conditions so well found and equipped a force as that which has been, and is still being, landed in South Africa. And after all, while giving every credit to the enterprise, tactical skill, and defensive ability displayed by the Boers, what have been the advantages that they have hitherto gained which are likely to affect the ultimate result? They have "hung up" and rendered ineffective for a time a large number of British troops and besieged, but not yet captured, certain garrisons with a result which is certainly anything but flattering to our arms in the meantime. The Boers have, nevertheless, failed in the great strategical object open to them—namely, to interpose a big force to the southward and take or threaten the port of Durban.

It is indubitably a very serious and formidable war. But the lesson to be read from the present situation has not been lost upon this nation. It has had the effect of welding together the separate units of the empire and all classes of society in a way that nothing else could have brought about. Henceforth the Boer entrenchments will no doubt be shelled by British artillery after a fashion to which they have not yet been subjected, while a large column of our army will in all probability soon be concentrated and organised for the invasion of the Free State and a march upon Bloemfontein or through the Transvaal to its capital—to say nothing of the constant harassing of the enemy's troops and lines of communication by the bodies of cavalry, mounted infantry, and field artillery which will soon be put into the field. Things will assume a very different aspect when we follow the same kind of tactics and fight with the same weapons as our foes. For this the so-called irregular forces are admirably adapted, and for fights in the open and on the plain there are no better troops in the world than our British infantry and field artillery. The fact is, that the judgment of the British public has been unduly influenced by the more speedy and decisive results of our campaigns elsewhere under altogether different conditions and where there had been time to make all our plans and perfect our arrangements beforehand. The Lord Mayor struck a happy and right note in his speech to the Volunteers at the Guildhall when he said: "It is a vexed question whether the first day of this January ushers in the new century, but it is beyond doubt that you to-day have inaugurated a new era in our national history;" and, again, when he added that we have been forced to the arbitrament of war and that we shall not sheath the sword until our supremacy in South Africa is established—a supremacy which will be universally welcomed as securing in that country the equality before the law of all nationalities, and in consequence real freedom in its fullest and only true sense. Despite the utterances of the foreign press we may be sure that the Continental governments take a more sober and correct view of the situation and are duly impressed with the attitude and the actual and potential capabilities of this country. We must apologise to our readers for having been led into saying so much, but we think that people in this country are not in a position to form anything like a fair or proper estimate of the reasons which have influenced the generals in the field, or as to what the present or future situation will be, although the nation may still have to exhibit some fortitude and "staying power" until it is reached.

The Government has made an addition to the civil staff of consulting surgeons for the field. As we announced last week the following surgeons have been appointed to proceed to South Africa:—Sir William Stokes, surgeon-in-ordinary to the Queen in Ireland, and surgeon to the Meath Hospital, Dublin; Mr. Watson Cheyne, surgeon to King's College Hospital, and professor of surgery in King's College, London; Mr. G. L. Cheatle, assistant surgeon to King's College Hospital, and teacher of practical surgery in King's College; and Mr. Kendal Franks, late senior surgeon to the Adelaide Hospital, Dublin, and surgeon-in-ordinary to the Lord Lieutenant of Ireland. Sir William Thomson, ex-President of the College of Surgeons in Ireland, is also proceeding to South Africa as the principal surgeon of a special hospital there; and Sir John Furley is likewise embarking for the theatre of war where his services and experience in connexion with ambulance work will be of much value.

We regret to notice that the deaths from enteric fever in Ladysmith are mounting up and that the outbreak of this fever in that garrison is apparently a somewhat severe one. Dysentery is likewise prevalent among the troops to some extent. We are extremely glad to learn on all sides that the wounded in South Africa generally are doing well; indeed, their progress is highly satisfactory. Many of the more slightly wounded will soon be fit to return to field duty. The climate is described as very favourable for their treatment, and it is needless to add that antiseptic surgery is universally adopted in the field and at the various war hospitals. Our casualties, as we have already said, have not so far been heavy when calculated on the whole force. We hear very little indeed, as might be expected, as to the number of sick and wounded among the Boers, and we understand that the Transvaal Government has only recently begun to publish any statistical and nominal returns of those who have died. What with the exposure in the field, the difficulties of food-supply, the prevalence of dysentery, and the amount of fighting which has taken place there must inevitably have been a large amount of inefficiency among them from various causes.

The number of sick and wounded in the various British hospitals will have severely taxed the organising and administrative capacities of the medical staff in South Africa, and when all the troops, transports, and supplies of all kinds arriving at the Cape are taken into account it may be readily imagined that the strain and labour entailed upon all are enormous. We notice that in speaking of the hospital accommodation at the Cape, the special correspondent of the *Times* recently alluded to the existence of complaints about the military hospital accommodation at Cape Town. While acknowledging the admirable skill and care of the medical officers, the correspondent considered that the hospital establishments had been calculated on too small a scale and that improvement in the organisation of the arrangements was required. This is not, we think, surprising under the circumstances. No one at the beginning of the war formed a correct, or even approximately correct, calculation of all that has since taken place. The existing buildings and hospital accommodation had to be made available, and it necessarily takes time under such conditions as prevailed at Cape Town to adjust matters to them and to the requirements of the occasion. British officers and soldiers generally have, as we know, very vigorous appetites when they are not really sick or when their wounds are relatively slight, and it is, perhaps, the simplest and most economical plan in the end to follow the practice adopted by the Americans in their war hospitals at the time of the rebellion and provide the amplest food supplies for all suitable cases. The head of a big military hospital requires all the organising and business qualifications which would fit him to undertake the management of a lage hotel under the most trying circumstances. The wounded and sick from the Cape are arriving in this country and the preparations for sending out new divisions to the seat of war are proceeding apace. We publish this week some more interesting notes

from Sir William MacCormac as well as contributions from our Special Correspondents.

(NOTES FROM SIR WILLIAM MACCORMAC.)

Sir William MacCormac has very kindly sent us the following additional notes, which, written as they were under circumstances of great difficulty, we are certain our readers will appreciate.

After seeing all that there was to be seen of medical interest at Cape Town and hearing that it was uncertain when active operations might take place in the Kimberley direction it appeared to me that I might usefully employ my time by going to Durban and inspecting the hospital arrangements on the line towards Ladysmith, and perhaps accompanying the force marching to its relief. In this proposal the principal medical officer cordially concurred, so I left Cape Town in the *Briton* and arrived in Durban, a distance of 1000 miles, on Tuesday afternoon, Nov. 28th. On disembarking I found that the base was established at Pietermaritzburg, some 70 miles in the interior, and there I decided to go on by the night train, arriving in Pietermaritzburg about 8 A.M.

The country, when it became light enough to see it, looked very fertile, beautiful, and very green. Pietermaritzburg, the seat of the Natal Government, is a very clean, wide-streeted, pretty town. The houses have for the most part gardens around them filled with ixias, lilies, roses, and many flowering shrubs, amongst them the beautiful hibiscus. Everything seems to flourish in luxuriance.

General Buller is staying with Sir Walter Hely-Hutchinson at Government House, where I had the pleasure of again meeting him. His preparations are being completed and he will probably advance early in the coming week on the road to Ladysmith. If the Boers dispute his passage, as they doubtless will, there must be heavy fighting and serious loss in crossing the Tugela river.

Dr. P. C. Sutherland, an old practitioner, now of some 30 to 40 years' residence in the colony, told me that soon after his arrival he was directed by the Government to make an inquiry into the diseases of the natives, who are chiefly Zulus, and that he found an entire absence of phthisis or any form of tuberculous disease, but that now these are very prevalent amongst them, which he attributes to inoculation by phthisical Europeans. The manner of getting about here is by rickshs, as in Japan and other places. The Zulus who draw these rickshas are men of splendid physique, and many are quite handsome. Yet they die young, many from pneumonia, others from heart disease. It is not a use to put a man to.

I send you a further brief account of some interesting and some remarkable cases in the hospitals here. On Dec. 3rd the thermometer stood at 98° F. in a verandah in the shade, a very oppressive heat. I am almost immediately going on to Estcourt and Colenso, where fighting must shortly take place.

On the way from Cape Town to Durban the ship called for a few hours at Port Elizabeth and at East London, whence railways reach the border between Cape Colony and the Free State.

*Port Elizabeth, Nov. 26th.*—I went ashore and visited the Drill Hall, which is equipped for a small base hospital. It is a lofty hall, 112 feet by 81 feet, and contains 50 beds, which might be increased to 70. There are three small isolation wards in this hospital, which is in charge of two civilian surgeons. There are a few sick from the 1st Welsh Fusiliers who arrived by the *Kildonan Castle* the day before.

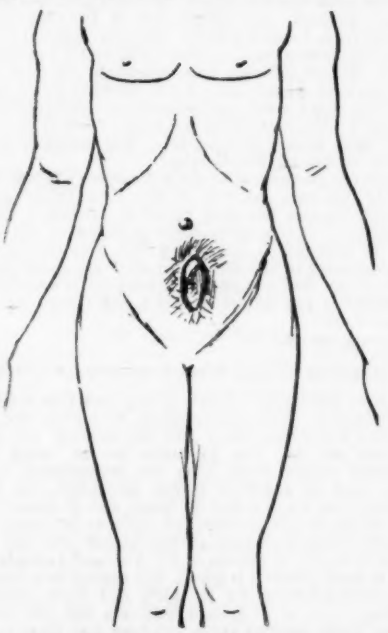
*East London, Nov. 27th.*—I went ashore, being lowered into the tender in a basket, and returned the same day—a novel and rather disagreeable experience—and I inspected the hospital ship *Trojan* lying in the Buffalo River here. It contains 72 beds for serious cases besides accommodation for 70 convalescents and accommodation for 18 officers—one beautifully fitted ward with five cots, the rest being placed in state rooms, some with only one cot, but mostly with two. There is a general ward aft with 37 cots, hung fore and aft to swing. The majority of patients, however, prefer fixtures. There is ample lavatory and bath accommodation. There is a lift to convey the patients on their stretchers from the upper to the main deck and a very easy inclined plane with steps for invalids going up or down or for carrying stretchers easily. There is room for 50 convalescents on the troop deck and accommodation there also for the Royal Army Medical Corps men. The operating theatre is very conveniently arranged and is amply supplied with sterilising apparatus, instruments, and antiseptic material. A small ward adjacent serves for special operation cases. The smoking-room of the ship is converted into a day-room. There is a steam laundry, pharmacy, electric light throughout, and electric fans which have the effect of cooling the air—or, rather, of making it feel cooler. The ship is lighted throughout by electricity.

There are three surgeons—Major Hart in command, and two civilians—and there are three nursing sisters, who have excellent quarters reserved for their exclusive use, and 21 orderlies of the Royal Army Medical Corps. The "Hopper," with Jay's disinfectant, carries off all excreta. The whole ship is admirably fitted and arranged and its present purpose is to serve as a base hospital for General Gatacre's division. It looks most comfortable and even luxurious. A non-dieted hospital is being equipped ashore in the Drill Hall and as soon as it is ready Major Hart will send the present cases ashore. They number about 14, chiefly venereal and quite unsuitable for a hospital ship.

*Durban, Nov. 28th.*—Just as we arrived at 2 P.M. the *Spartan* hospital ship was moving out for Cape Town. I landed about 6 P.M., and finding that the base was at Pietermaritzburg I decided to go on by night train. Major McCormack made everything very easy for me, and I reached that place about 8 A.M. to-day. I found Colonel T. J. Gallwey, P.M.O., waiting for me at the station; he is brother of Colonel Gallwey of the Somersets. I visited with him in the afternoon the hospital in the Legislative Assembly building, fitted with 50 beds as a temporary hospital. The large meeting hall contains wounded and sick—both from dysentery and fever. In one case of gunshot the bullet entered on a level with the tubercle of the tibia, about an inch to the fibular side, and emerged through the middle of the fold of the corresponding buttock. The man was running at the time in a charge. In another case a bullet entered just above the left clavicle and passed out behind, about two and a half inches below the angle of the scapula or about the ninth rib, causing a furrowing wound in the soft parts. Empyema followed, and the man had rigors, but effective drainage was possible through the posterior wound, which was large, and the patient is now doing well. In a third case a curious flesh wound was caused by a bullet which passed transversely across, entered the anterior surface of the left shoulder, emerged below the centre of the clavicle, entered again beneath the right clavicle, and crossed the anterior portion of the right deltoid, to emerge in a position exactly similar to where it entered, causing four quite symmetrical wounds. There were no symptoms. The patient made a rapid convalescence. There were several wounded from the armoured train, chiefly by splinters of shell. One had received six such wounds in the lower extremities. There were also two severe scalp wounds. There are in all three wards: the large one already mentioned in the large meeting room of the Assembly and two smaller ones for officers. In these were four convalescent officers suffering from sickness. The staff consists of Major Browning, R.A.M.C., two civilian surgeons, and five nursing sisters from Johannesburg. At the present time there are 38 cases in this hospital.

I then went to visit the College Hospital in a large new school building. This contains four wards and supplementary stationary hospital in tents—marquees for eight beds and bell tents for three stretchers. This is an addition to the hospital proper, which has 70 beds. There are three surgeons—one of the Royal Army Medical Corps and two civilians, one being an old student of mine in Belfast from Johannesburg. There are also four nurses not belonging to the Army Reserve. The sick and wounded were chiefly from the Imperial Volunteer forces. One young fellow about 20, admitted on Nov. 24th, was shot in the thigh at Mooi River on Nov. 21st. The bullet entered near the middle of the fold of the buttock and emerged, after fracturing the femur, at a little below the centre of the inner aspect of the thigh over the course of the femoral artery. He was dragged along, he says, by two comrades for two miles before aid was reached. The foot is stated to have been very cold on arrival here, and it was more than doubtful if any pulse could be felt in the posterior tibial artery. When I saw it the foot was cold and discoloured—reddish brown; evidently gangrene had set in. The question was should amputation be performed, and where? On the 30th the discolouration was more pronounced. The temperature on the previous night was 102° F., on the morning of the 30th it was 99·6°. I advised amputation.

On the 30th I visited Grey's Civil Hospital. Dr. J. F. Allen, a practitioner of 30 years' standing at Pietermaritzburg, is in charge. There are 80 beds in two large wards and a dozen smaller wards containing two, four, and six patients each. 100 patients were treated there after the fights at Dundee and Elandslaagte. There are now many enteric cases, Zulu natives and East Indians, who mutually despise each other and quarrel. There is a very good operating-room. One very interesting case is that of a man of 24 years of age, wounded accidentally at the firing butts at 400 yards range with a Lee-Metford bullet on Nov. 1st. The bullet entered behind, passed through the right sacro-iliac synchrondrosis, and emerged half-way between the anterior superior spine and the ninth costal cartilage after traversing the cæcum. The man was wounded at 11 A.M. and had to be carried back a distance of nine miles in an ambulance waggon. At 7 P.M. Dr. Allen made a vertical incision five inches long, the bullet aperture being in the centre, and traced its track until he came down upon the cæcum, in which he found two apertures close together, as if the ball had passed through a fold of bowel. Some fæcal extravasation had taken place. The wounds were invaginated and the bowel was closed over them with Lembert's suture and the posterior entering wound of the bowel was similarly dealt with. The abdomen was flushed with boiled water, the wound closed, and drainage used. All went well without any symptoms and the patient is up and convalescent. Another case was that of a man wounded at Elandslaagte, presumably by a shell. He has made a good recovery but there is now an opening communicating with the bladder about one and a half inches long and one inch wide (see illustration). All the urine escapes through this wound, which is surrounded with a cicatricial surface, and the floor is seen lined with the



red mucous membrane of the bladder. The remarkable point is that the lower border of the present opening is one and a quarter inches above the symphysis pubis and it is difficult to see how the peritoneal cavity could have escaped. He has had, however, no symptoms of any kind indicating that it was wounded. The man could not remember whether his bladder was full or not at the time of the injury, which took place at Elandslaagte at the end of the fighting, by a bullet, as he believes, but this is not possible. He lay on the field all the following night, but has made a good recovery and is now convalescent. I should think that by freshening a wide surface all round the opening can be closed.

I visited the Fort Hospital with the Principal Medical Officer (Colonel Gallwey, R.A.M.C.) in the afternoon.

Dr. Maunsell of the School Hospital visited me this morning to consult about the poor fellow whom I have mentioned above. The foot was already drying up and a line of demarcation was plainly marked. Amputation was performed by Dr. Maunsell below the knee. It was the best and only chance for him. The patient was removed to this hospital as there were no operating conveniences at the College Hospital.

Pietermaritzburg, Nov. 29th.

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(FROM OUR WAR CORRESPONDENT.)

I have just been over No. 2 General Hospital at Wynberg. It is composed of some 48 marquees, besides officers' tents and other necessary erections. Each of the afore-named marquees accommodates six men—288 patients in all. The site chosen for its location is just below and to the right of No. 1 (*vide* large squares on the left hand of the plan in THE LANCET, Dec. 16th, 1899, p. 1690). Its water-supply is simply a continuation of what I have previously drawn your readers' attention to and the arrangement for its drainage practically the same as adopted by its sister camp higher up the hill. Colonel Duke is in chief command and to his zeal and activity the present perfect state of the camp owes its origin, Major Addison being the secretary and registrar. Major Lougheed has charge of the Surgical and Major MacDonald of the Medical Division, assisted by Lieutenant Goldsmith and Lieutenant Newman—all officers of the Royal Army Medical Corps. Besides these there are 12 civilian doctors with a nursing staff of eight sisters under the control of Miss Hardmant. The nursing-staff appears somewhat inadequate to cope with the requirements of nursing so many wounded men who are there already—with many more to follow; but the difficulty will probably soon be bridged over by the arrival of nine more sisters who are coming out, and will reach the hospital in a day or so. Colonel Duke, R.A.M.C., having called my attention to the want of a large recreation marquee for the use of convalescents as well as to the desirability of having several verandah chairs, some tobacco, cigarettes, matches, books, fruit, eggs, and flowers for the use of patients, I called on my return to Cape Town upon the editors of the leading local papers and by their generous assistance brought these wants prominently before the public, with the result that in a few days' time all these necessaries were forthcoming in profusion to brighten up the countenance of many a wounded soldier. The latrines, two in number, are placed one on each side of the camp. They are elongated wooden-walled, metal-roofed structures, supplied with several galvanised receptacles on the dry-earth system. These buckets are emptied daily, all excreta being deodorised and disinfected. A partition (wooden) divides these latrines longitudinally into two compartments. One of these is used as a lavatory. Down the centre of it runs a long narrow wash-board covered with zinc, and just above this there are two rows of iron piping filled with several brass taps, through which water is conveyed for washing purposes.

The cook house deserves special notice. It is a long roomy wooden and brick structure, with a galvanised roof, conveniently located near to the men's sick wards. In it there are two large cooking ranges and four independent boilers capable of turning out exceedingly well-cooked food for about 400 persons. Under a span roof at the back part of it there is a similar arrangement as before described in the latrines—with this exception, that in this well-arranged scullery an ample and constant supply of hot and cold water being maintained by the double piping and taps enables the cleansing of plates and dishes to be carried out with scrupulous care and cleanliness.

All dirty and used water, falling by natural gravity, is conducted by drains to soil pits some distance from the camp.

At times the wind, especially when its direction is S.E., is both gusty and strong, and the ordinary wooden tent-peg proves unequal to the task of holding the marquee in position, therefore long iron stays with square flat metal bottoms have to be requisitioned. These are to be cemented in brickwork and will probably save the tents in the future.

Each hospital marquee measures 14 feet by 20 feet inside, and with its stays covers a space of from 30 to 50 feet, a clear approach of from 15 to 20 feet being preserved between each of them. Standing regularly as they do in eight rows of six, with their well-defined approaches they present a very neat and most imposing appearance.

As some operations had to be performed this afternoon I proceeded with Colonel Duke to the tent used for operating, a small marquee located just outside the wards. It is somewhat small for the requirements; but it is only a makeshift until a larger and more substantially built one can be erected. One must remember that under existing circumstances a great deal has had to be organised and carried out at short notice. The work that has already been got through and the state of preparedness shown so as to cope with any emergency reflects the very highest credit on all the officials concerned. There is no chaos here at any rate. In the centre of the tent is the operating couch, and on a side table placed in the corner all necessary sterilising, antiseptic, and other requisites are fully in evidence. Chloroform seems to be preferred to any other anæsthetic, but I noticed that ether was there should it be required.

By the kind permission of the chief and operating staff I was afforded the opportunity of seeing several operations performed during my stay, and the able and dexterous manner in which the various cases were operated upon, as well as the success which has followed the operations, speaks volumes—more than any words I could use—for the skill displayed by our military surgeons at the front.

The first case I saw brought to the operating table was that of a private soldier with a gunshot wound of the hand. The bullet, a Martini-Henry, had crushed the second finger of his right hand, the first phalanx being smashed to pieces. There was also so much destruction and sloughing of the soft parts that amputation at the metacarpal joint was performed. Chloroform was administered, the finger was neatly removed, the hand bandaged, and the patient put to bed in a few minutes.

The next case was also that of a gunshot wound. A soldier had been wounded by a Martini-Henry bullet in the leg. The bullet had entered about the centre, but rather to the right, of the tibia, and, taking a somewhat oblique course across its anterior part, bored through the muscles and made its exit at the back of the leg. A large abscess had formed along the track of it and was burrowing into the thick part of the calf. It was deemed advisable to thoroughly explore the condition of the parts and to let out pus if any should be found. The patient was soon under the influence of a moderate application of chloroform, and both the entrance and exit apertures being carefully enlarged a finger was passed down the abnormal canal at the point of entrance to feel a quantity of loose bone fragments lying some two inches from the surface. On the introduction of a pair of long-nosed forceps a piece of bone was easily extracted, smooth and quite denuded of periosteum. A reintroduction of the forceps brought away several more pieces of a lesser size with some blood-clots and pus. A long slender probe was then passed through the leg, followed by the insertion of a No. 1 drainage-tube. The track was syringed out with an antiseptic solution, bringing through the posterior opening a quantity of bone fragments and purulent matter. The drainage-tube was then securely fixed *in situ* with pins, the usual dressings and bandage applied, and the patient taken back to bed.

A third and very bad case was that of a compound comminuted fracture of a patient's left thigh-bone caused by an exploded shell, complicated by an attack of tetanus—happily the first that has so far occurred. A private was wounded some nine or 10 days since. On arrival at Wynberg No. 2 Hospital he was found to be in a most dangerous condition. An examination revealed the presence of a large, irregularly shaped wound on the upper and fore part of his left thigh; another similar wound could be seen on the upper and posterior part of the limb at the base of the buttock. From these wounds several large pieces of shell were extracted; but the state of the poor fellow's pulse and temperature did not warrant any more active measures being taken beyond giving him ease from pain and the application of antiseptic lotions and dressings. Yesterday, however, tetanic symptoms supervened and to-day (the 7th), in spite of the use of large and oft-repeated doses of chloral and anti-tetanic serum injections, the convulsive symptoms have not lessened, but are, if anything, increasing in frequency and force.

The patient was brought to the operating tent, chloroform was given, and he was soon under its influence, but the tetanic spasms, although lessened, were never brought completely under control. A careful examination of the parts was made to see if there was any chance of removing the limb at the hip-joint, only to discover the terrible nature of the wounds which he had received, and to prove conclusively that there was no chance of obtaining sufficient quantity of flesh in any direction to form a flap to cover the stump intended to be made. A long probe detected a large cavity running nearly back to the anus. It was wisely decided not to operate, but to return the sufferer back to his bed. His temperature stood at 99 5° F., whilst his pulse was 79. I can only say as far as my observation went, that the patient received every possible care from Civil Surgeon Suffield who has ward charge of the patient and every attention from the senior officers who have consulted on the case. It was found desirable to isolate him from any other surgical cases in order to avoid risk of infection.

A most remarkable case is that of a private of the Northumberland Fusiliers. He also was wounded about 10 or 11 days ago. The Mauser bullet entered his left temporal region, must have gone close to, or even through, a portion of his brain, and coursing diagonally across the back of the orbit made its exit in the centre of the right malar bone of that cheek. With the exception of some sanguineous effusion into the corner of his left eye there is nothing to indicate that the patient has received an injury of any kind whatever. He eats, drinks, sleeps, and sees well. He is a fine specimen of the genus "Tommy" and was quite humorous in describing the manner in which he received his injury.

Another case was pointed out to me by Colonel Duke in which a Mauser bullet had struck the man in the centre of his throat (pomum Adami), evidently coursed round the patient's neck (the discoloration of the integuments confirming this) on the right side, and passed out just at the centre of the back of his neck.

There have been already 185 cases admitted into this newly formed hospital. One patient died on Dec. 3rd just as he arrived from fractured skull. Another patient succumbed on the 6th from a gunshot-wound, the bullet perforating the colon. Six are suffering from dysentery, six from debility, and two have rheumatism. I am informed upon very good authority that our red Marine force fared rather badly in the last fight. No less than 50 per cent. of the force employed have been killed or wounded. The wounded are being treated at Simon's Bay Hospital.

News has just arrived of the unfortunate affair at Molteno, on the southern borders of the Free State, and that General Gatacre has been forced to perform a retrograde movement. That a considerable addition to our wounded may be expected is proved by the hurrying up of our hospital trains to the north, and as I am going up to the front in the first one starting I must ask you not to be disappointed if you do not receive a letter from me by next week's mail.

Wynberg, Dec. 7th.

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(FROM OUR SPECIAL CORRESPONDENT AT THE BASE.)

I have absolutely nothing to tell you this week; there have been no fresh engagements this side, and all our patients are doing well. We are clearing the hospitals as fast as we can in order to be ready for the wounded coming down from the engagements that may take place at any time before Kimberley. It has been raining here for the last 24 hours, and of course this has not added to the comfort of patients in tents. No. 3 General Hospital is open at Rondebosch and will take its share of work. A portion of No. 4 arrived yesterday but we do not know where it is going. Our anxiety is to know where the medical officers for the Fifth and Sixth Divisions are coming from, as at present there are 240 odd men of the Royal Army Medical Corps out here and there cannot be many more available. The bearer company in the transport *Ismore* lost all their gear and equipment and had a very bad time, but luckily no loss of life took place. Mr. Treves is up at East London, and Sir W. Mac Cormac is still at Durban, but is expected back. Mr. Makins is at Modder River.

Since writing the above the disastrous engagement at Stormberg and the big fight at Spytfontein have taken place and we are expecting a very heavy contingent of wounded in a few days from both sides of the colony, but with three general hospitals available there will be ample accommodation.

Dec. 15th.

# VITAL STATISTICS.

### HEALTH OF ENGLISH TOWNS.

IN 33 of the largest English towns 6784 births and 6016 deaths were registered during the week ending Dec. 23rd. The annual rate of mortality in these towns, which had increased from 18·9 to 22·0 per 1000 in the three preceding weeks, further rose to 27·5 during the week under notice. In London the rate was 29·9 per 1000, while it averaged 25·9 in the 32 provincial towns. The lowest death-rates in these towns were 17·6 in Huddersfield, 18·9 in Leeds, 19·4 in Burnley and 19·7 in Blackburn; the highest rates were 36·4 in Preston, 36·7 in Swansea, 38·9 in Plymouth, and 42·4 in Portsmouth. The 6016 deaths in these towns included 578 which were referred to the principal zymotic diseases, against numbers increasing from 422 to 501 in the five preceding weeks; of these 168 resulted from measles, 122 from diphtheria, 111 from whooping-cough, 80 from "fever" (principally enteric), 45 from diarrhœa, 44 from scarlet fever, and eight from small-pox. The lowest death-rates from these diseases were recorded in Croydon, Plymouth, Wolverhampton, Derby, and Huddersfield; and the highest rates in Salford, Blackburn, Sheffield, and Hull. The greatest mortality from measles occurred in Birkenhead, Salford, Preston, Sheffield, and Hull; from whooping-cough in Leicester, Liverpool, Bolton, and Salford; from "fever" in Portsmouth, Nottingham, and Preston; and from diarrhœa in Burnley. The mortality from scarlet fever showed no marked excess in any of the large towns. The 122 deaths from diphtheria included 54 in London, 15 in Sheffield, eight in Leeds, five in West Ham, and five in Portsmouth. Eight fatal cases of small-pox were registered in the week ending Dec. 23rd in Hull, but not one in any other of the 33 large towns; five small-pox patients were under treatment in the Metropolitan Asylums Hospitals. The number of scarlet fever patients in these hospitals and in the London Fever Hospital on Saturday, Dec. 23rd, was 2916 against numbers decreasing from 3578 to 3084 at the end of the five preceding weeks; 209 new cases were admitted during the week, against 294, 277, and 180 in the three preceding weeks. Influenza was certified as the primary cause of 69 deaths in London. The deaths referred to diseases of the respiratory organs in London, which had increased from 324 to 646 in the five preceding weeks, further rose to 968 during the week under notice, and were 506 above the corrected average. The causes of 93, or 1·5 per cent., of the deaths in the 33 towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Nottingham, Bradford, Leeds, and in 10 other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Liverpool, Blackburn, and Sheffield.

### HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 20·0 and 21·5 per 1000 in the two preceding weeks, further rose to 22·6 during the week ending Dec. 23rd, but was 4·9 per 1000 below the mean rate during the same period in the 33 large English towns. The rates in the eight Scotch towns ranged from 17·9 in Aberdeen and 19·5 in Edinburgh and in Leith, to 24·8 in Greenock and 33·8 in Perth. The 690 deaths in these towns included 37 which were referred to measles, 14 to diarrhœa, 12 to whooping-cough, 10 to "fever," eight to scarlet fever, and three to diphtheria. In all 84 deaths resulted from these principal zymotic diseases, against 69 and 81 in the two preceding weeks. These 84 deaths were equal to an annual rate of 2·8 per 1000, which was 0·2 above the mean rate in the previous week from the same diseases in the 33 large English towns. The fatal cases of measles, which had been 28 and 31 in the two preceding weeks, further rose to 37 during the week under notice, and included 20 in Glasgow, eight in Greenock, and five in Dundee. The deaths from diarrhœa, which had been 20 and 17 in the two preceding weeks, further declined during the week ending Dec. 23rd to 14, of which five occurred in Glasgow and three in Paisley. The fatal cases of whooping-cough showed a marked decline from the number in the preceding week and included five in Glasgow and three in Paisley. The deaths referred to different forms of "fever," which had been eight and six in the two preceding weeks, rose again during the week under notice to 10, of which five occurred in Glasgow. Of the eight fatal cases of scarlet fever five were recorded in Glasgow, where two of the three deaths from diphtheria were also registered. The 183 deaths referred to diseases of the respiratory organs in these towns slightly exceeded the number in the preceding week, and were 64 above the number in the corresponding period of last year. The causes of 37, or more than 5 per cent., of deaths in these eight towns during the week ending Dec 23rd were not certified.

### HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 38·6, 38·5, and 38·2 per 1000 in the three preceding weeks, further rose to 42·5 during the week ending Dec. 23rd. During the past four weeks the death-rate in the city has averaged 39·5 per 1000, the rate during the same period being 23·9 in London and 18·3 in Edinburgh. The 285 deaths registered in Dublin during the week under notice were 29 in excess of the number in the preceding week, and included 38 which were referred to the principal zymotic diseases, against numbers decreasing from 72 to 34 in the five preceding weeks; of these, 24 resulted from measles, five from diarrhœa, three from diphtheria, three from "fever," two from whooping-cough, and one from scarlet fever. These 38 deaths were equal to an annual rate of 5·7 per 1000, the zymotic death-rate during the same period being 2·3 in London and 1·0 in Edinburgh. The fatal cases of measles, which had been 30 and 23 in the two preceding weeks, rose again in the week ending Dec. 23rd to 24. The deaths from diarrhœa, which had been four and three in the two preceding weeks, rose again to five during the week under notice. The mortality both from diphtheria and from "fever" was slightly in excess over that in the preceding week. The two deaths from whooping-cough showed a decline from recent weekly numbers. The 285 deaths in Dublin during the week ending Dec. 23rd included 36 of infants under one year of age and 75 of persons aged upwards of 60 years; the deaths both of infants and of elderly persons exceeded the numbers recorded in the preceding week. Three inquest cases and seven deaths from violence were registered, and 97, or more than a third, of the deaths occurred in public institutions. The causes of 21, or more than 7 per cent., of the deaths in the city were not certified.

# THE SERVICES.

### ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Surgeons: C. B. Fairbank to the *Speedy*, when commissioned, and R. St. G. S. Bond to the *Pembroke*.

### ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel L. A. Irving, A.M.S., is appointed Recruiting Medical Officer in the London Recruiting District, vice Lieutenant-Colonel W. Johnston, appointed for temporary duty at headquarters. Major Stuart assumes charge of the Station Hospital, Ahmedabad. Captain E. W. Cochrane is attached to the Station Hospital, Poona, for duty until further orders. Major J. F. Burke has arrived at York for duty. Major F. J. Morgan is appointed to the 7th Division, and Captain E. C. Anderson to the medical charge of the 1st Battalion the West Riding Regiment, for South Africa. Major F. J. Morgan has left for South Africa. Major Franklin, Major Cummins, Lieutenant Stafford, Lieutenant Davis, and Civil Surgeon Collum, have left in the *Goorkha* for South Africa.

### INDIA AND THE INDIAN MEDICAL SERVICES.

The services of the undermentioned officers are placed temporarily at the disposal of the Governments named:—Bombay: Captain D. C Johnston and Captain F. A. Smith. Bengal: Captain W. D. Hayward and Captain A. W. R. Cochrane. Madras: Captain T. H. Foulkes and Captain C. B. Harrison. Major J. T. W. Leslie (Bengal), Secretary to the Director-General Indian Medical Service, and Sanitary Commissioner with the Government of India, is granted furlough out of India for two years.

### ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Lieutenant D. L. Hamilton resigns his commission. Surgeon-Lieutenant-Colonel Francis James Pearse,

1st Middlesex Rifle Volunter Corps, to be Surgeon-Lieutenant-Colonel. Surgeon-Captain R. B. Graham to be Surgeon-Major. Surgeon-Lieutenant Evan Evans, 1st Volunteer Battalion the Welsh Regiment, to be Surgeon-Captain. Surgeon-Lieutenant William Owen Evans, 2nd Volunteer Battalion the Royal Welsh Fusiliers, to be Surgeon-Lieutenant.

VOLUNTEER CORPS.

*Artillery:* 1st Devonshire (Western Division, Royal Garrison Artillery): Surgeon-Lieutenant G. P. Barton to be Surgeon-Captain. 1st Sussex (Eastern Division, Royal Garrison Artillery): Surgeon-Lieutenant E. T. Cox to be Surgeon-Captain. *Rifle:* 3rd Volunteer Battalion the Prince Albert's (Somersetshire Light Infantry): Surgeon-Lieutenant-Colonel W. H. G. Phelps to retire, with permission to retain his rank and to wear the uniform of the battalion on his retirement. 2nd Volunteer Battalion the Royal Sussex Regiment: Philip John Le Rich to be Surgeon-Lieutenant. 1st (Pembrokeshire) Volunteer Battalion the Welsh Regiment: Surgeon-Lieutenant E. Evans to be Surgeon-Captain. 3rd Volunteer Battalion the Essex Regiment: Hugh Neville Adam Taylor to be Surgeon-Lieutenant. 1st Volunteer Battalion the Royal North Lancashire Regiment: James Lea to be Surgeon-Lieutenant. 4th Volunteer Battalion the Manchester Regiment: Surgeon-Lieutenant D. L. Hamilton resigns his commission. 7th (Clackmannan and Kinross) Volunteer Battalion, Princess Louise's (Argyll and Sutherland Highlanders): Surgeon-Major J. H. Hay to be Surgeon-Colonel.

VOLUNTEER MEDICAL STAFF CORPS.

The London Companies: Surgeon-Lieutenant W. E. Miles to be Surgeon-Captain.

ARMY MEDICAL SCHOOL, NETLEY.

In consequence of the war in South Africa the following gentlemen, who were nominated by the Secretary of State for War as Surgeons-on-Probation in the Army Medical School, Netley, for the Royal Army Medical Corps, having passed an examination in the subjects taught in the Netley school, have been commissioned as Lieutenants in the Royal Army Medical Corps:—

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| A. H. Safford. | G. H. Merry. |
| A. F. Carlyon. | W. C. Croly. |
| C. R. Evans. | R. McDonnell. |
| C. S. Cato. | A. MacLoughlin. |
| J. A. Hartigan. | A. J. M. Cuddon-Fletcher. |
| H. C. R. Hine. | R. L. Davies. |
| J. F. Martin. | C. S. Smith. |
| J. M. Buist. | C. C. Cumming. |

MENTIONED IN DESPATCHES.

In a despatch to the Secretary of State for the Colonies signed by Colonel F. D. Lugard, C.B., D.S.O., relative to the West Africa Field Force operations, the following paragraph occurs:—"I noticed that the published list of rewards contained no recognition of the excellent services of the Medical Department, of whose work I spoke in my despatch in the strongest terms at my command. I venture to bring to special notice the name of Dr. W. Poole, Principal Medical Officer of the Force, whose previous record of service in Nyassaland under the Foreign Office constitutes an additional claim upon Government."

In a despatch from Colonel Ternan, D.S.O., to the Secretary of State for Foreign Affairs the name of Captain Haig, I.M.S., is mentioned with reference to services in the operations against Kabarega, late King of Unyoro.

TRANSVAAL WAR NOTES.

The entire medical equipment of the City of London Imperial Volunteers throughout the present war in South Africa is being supplied as a gift to the nation by Messrs. Burroughs, Wellcome, and Co.

Following the practical sympathy shown by the medical men at Newport in placing their services at the disposal of reservists' and militiamen's families, the governors of the Newport and Monmouthshire Hospital have resolved to honour all prescriptions granted by the medical practitioners who are attending the families at their homes.

Sir William Thomson, ex-President of the Royal College of Surgeons in Ireland, has been appointed chief surgeon to a special Irish base hospital which is being equipped by Lord Iveagh. Sir William Thomson will be assisted by four surgeons and the hospital will be stationed on the lines of communication at the places where it may be most urgently required on its arrival in South Africa.

A telegram from the *Times* correspondent at Lorenzo Marques, dated Jan. 2nd, states that "Major Daly's ambulance corps ..... left Dundee for Pretoria on Sunday with 29 wounded. The Boers gave the doctor to understand that he would be allowed to attend the wounded at Pretoria, but he was not even permitted to take them off the train and see them lodged in the hospital, although several cases were critical. ..... The Boer authorities at Dundee behaved shockingly towards the British ambulance, notwithstanding the kindness shown to the burgher wounded. For 11 days the doctor and his men were kept strict prisoners in a compound. During Christmas there was a terrible amount of drunkenness and rowdiness in the town, the Boers going about with loaded Mausers. One twice pointed his rifle at the doctor."

We understand that Dr. Conan Doyle will shortly leave for South Africa in connexion with a stationary hospital.

We understand that the War Office is endeavouring to ascertain how many beds each of the large hospitals in this country will be able to place at its disposal in case of need.

Major Burtchaell, R.A.M.C., who was made prisoner by the Boers at Magersfontein, has, we understand, been released.

DEATHS IN THE SERVICES.

The *Times* announces the death of Surgeon-Major Alexander Gibb Grant, Bengal Army, Hon. Surgeon to the Queen, retired, on Jan. 3rd, at his residence in Connaught-square, Hyde-park.

In future an officer serving in India who has received in action a bodily injury certified by the regulated medical authority to be very severe, though not equivalent to the loss of a limb, will be allowed a gratuity of from three to 12 months' full pay of the appointment held by him at the time of the injury.

# Correspondence.

"Audi alteram partem."

## AN APPEAL TO THE YOUNGER MEMBERS OF THE MEDICAL PROFESSION.

*To the Editors of* THE LANCET.

SIRS,—In the crisis through which our Empire is passing the importance of the Militia, Yeomanry, and Volunteer forces as a support to the army is fully evinced. And as it is impossible to forecast the further demands which may have to be made upon them in the near or distant future it behoves us to strengthen them to the utmost of our power.

Many members and students of our profession are already enrolled in them and are answering the call now made upon them with patriotic promptitude. We venture to take the opportunity suggested by the beginning of a New Year of appealing to such of the younger members and of the students of the medical and dental professions as are still unattached, yet capable of bearing arms or in other ways of helping in Imperial defence, at once to consider the advisability of joining some branch of the service.

FREDERICK T. ROBERTS, M.D., F.R.C.P. Lond.,
Physician to University College Hospital;
EDMUND OWEN, M.B. Lond., F.R.C.S. Eng.,
Surgeon to St. Mary's Hospital;
WILLIAM COLLINGRIDGE, M.A., M.D. Cantab.,
Surgeon-Lieutenant-Colonel Militia Medical Staff; late commanding Militia Medical Staff;
WILLIAM DUNCAN, M.D. Brux., F.R.C.S. Eng.,
Captain Middlesex Yeomanry Cavalry;
J. EDWARD SQUIRE, M.D., M.R.C.P. Lond., M.R.C.S. Eng.,
Surgeon-Lieutenant-Colonel Commanding Volunteer Medical Staff Corps (London Companies).

London, Jan. 1st, 1900.

## "DENTAL APPOINTMENTS AT GENERAL HOSPITALS."

*To the Editors of* THE LANCET.

SIRS,—As you have kindly opened your pages to a correspondence on the qualifications of dental surgeons to general hospitals I hope that the question may not be complicated by considering the case of hospitals having

dental schools attached to them or the qualifications required by teachers in purely dental hospitals. The point for the medical profession to consider is the advantage accruing to the general students or to the general practitioners who may require dental instruction during their hospital studies or after they have secured their diplomas. Unless the character of medical students has greatly changed I do not think that they are likely to seek or to receive information very graciously from gentlemen, however competent, who from their (the students') point of view occupy a professional position so different from their own. Again, a dentist who has taken the additional qualifications is able to take a surgical or medical as well as a purely dental view of the subject either in lecturing or in operating. That the general student requires special instruction in matters dental is often painfully obvious to all educated dentists who have to meet general practitioners professionally and it is not always easy to do what is right for the patient and at the same time cover the position assumed by the medical adviser. For these and many other reasons I think it very desirable that the dental surgeon to a hospital to which a medical school is attached ought to carry both the diplomas of the dental surgeon and of the general practitioner. I also believe the idea that all dental surgeons will one day have the double qualification to be Utopian, and if realised would be injurious to the best interests of the general public so far as dentistry is concerned.

I am, Sirs, yours faithfully,

George-street, Hanover-square, W. JAS. SMITH TURNER.

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*To the Editors of* THE LANCET.

SIRS,—May I be allowed to supplement your very excellent annotation in THE LANCET of Dec. 23rd, 1899, upon this subject?

For many years *all* the London hospitals having medical schools attached required that their dental surgeons should in addition to the licence in dental surgery possess a surgical qualification. Several years ago two of them decided to abolish this rule and required only the L.D.S. diploma for their dental surgeoncy. The authorities of one hospital at the same time relegated their dental surgeon to a similar position to the dispensers of the hospital—that is to say, they were no longer to be treated as members of the staff, they were deprived of their seat on the medical committee, they had no voice in the management of the hospital or school, they had no share in the profits of the school, nor were they constituted paid officials, the sole recompense for their rather laborious services being that their names appeared as members of the staff. I believe I am right in saying they were the only truly honorary members of the staff. If the L.D.S. only was to qualify them for the position why were they to be subjected to the indignity of being placed in an inferior position to any other member of the staff? The charity in question appears to convict itself of inconsistency.

I venture to protest against this invidious distinction and to urge the authorities to go back to the old regulations and restore to their dental surgeon the privileges of which he has been deprived and to require such qualifications as may ensure his receiving the same courtesy from the staff, the students, and the committee of management as is accorded to those in charge of every other special department of a hospital; but this cannot be so if the L.D.S. only is to be a sufficient qualification for the appointment, because the curriculum for that diploma is fragmentary in medicine and surgery and the examination in those subjects and in anatomy, physiology, pathology, therapeutics, &c., is not adequate to place the holder of that diploma on an equal position with the other members of the staff. The dentist should rank equally with other members of the staff, and therefore his name should be found upon both the Dental and Medical Registers which is a guarantee that he possesses the knowledge and has had the education to efficiently equip him to teach medical students. That a dentist's opinions and vote are of value and often of importance is instanced in the discussions at the General Medical Council, where Mr. Tomes, a dental representative, has, in addition to the services rendered on dental matters, also taken a very active, honourable, and important part in questions relating to medical and surgical matters that have been under consideration.

I am, Sirs, your obedient servant,

MORTON SMALE.

The Dental Hospital of London, Jan. 1st, 1900.

## "THE CONFERENCE AT NEWCASTLE AND THE MIDWIFERY QUESTION."

*To the Editors of* THE LANCET.

SIRS,—In your issue of Dec. 23rd, "A Physician" has boldly elected to wrestle with the vexed midwifery question, though, in truth, he has not been brave enough to sign his name. He has gripped the subject by the throat in a very determined manner with all the force of first, second, and third seizures.

I have looked through his letter carefully and slowly, and after running my pen through lines that everyone is familiar with, and cancelling others that are scarcely germane, I find myself left with the following sentences: "All are agreed, Parliament and profession, that there is somewhat requiring remedy. That is where we are now. A remedy is to be devised. More, a remedy is going to be devised and enforced. Those who object to all and every remedy misconceive the position. It is no longer a question of what does the profession want or not want, it is which way is the inevitable remedy to be devised and applied? The Houses of Parliament know that well enough. The General Medical Council knows it well enough. Mr. Victor Horsley, as plainly appears by his speech on the subject at Newcastle, knows it well enough. The strange thing is that a considerable section of the profession does not seem to know it," and so on.

Now, these very sentences show, following as they do a reiterated preamble, that the writer of them is just about as helpless in the face of the midwives question as an average country parson is over incense. The mere shrieking "We must do something" in the centre of a grass-grown arena amounts to energetically doing nothing, after all, beyond clearly proclaiming helplessness. Therefore I deem three-fourths of the effort which he has made in his letter to be absolutely useless. I should have been better pleased to see him turn up his sleeves for real battle in the first half-dozen lines. I should have liked to see him draw blood somewhere in the first half column by the home-thrust of some convincing and clean-cut argument. No; the letter of "A Physician" will not tend in any way to help us in our troubles. I cannot avoid the suggestion of dual object which it gives me when I look again over the lines of it. I ask myself: Why has this letter been written? Has it a policy? Is its purport quite clear on the face of it? Is it signed by the medico's name? Still, in all charity, I go on searching and at last I find something—a remedy, "just as was done in the plumber's case." Your correspondent advocates registration of midwives and nothing more, and he points out a few advantages which would follow.

Now, who is there to find fault with registration? No one in their right senses. Registration is good; I myself strongly advocate it, but registration of what? I repeat the gist of my advocation as set forth and published in 1897 in "Economics, &c., in the Practice of Midwifery"—that midwives as formerly and at present understood should be abolished. Even the name should go. I would have in their place a new body of registered obstetric nurses, properly trained, whose powers and procedures should be strictly limited and who should be supervised at some stage in every case of confinement, no matter where occurring, by a qualified medical attendant who should see each case at least once during or after delivery. What time a nurse should send for a medical attendant should be left to her instructed and schooled judgment. She may deem it wise to send during labour; and she would always be likely to send soon enough, knowing that she was bound to send sooner or later. Thus no case of labour should escape at least a single inspection of a qualified medical attendant—even those living in remote districts, whose lives are as precious as any others. Hence would follow order, discipline, and right practice.

I could not in the space of a letter deal with the innumerable points concerning practicability which a whole scheme involves, but I am prepared to tease out any knotty point or to suggest plans to meet whatever difficult situation should appear to correspondents in THE LANCET who should desire to find fault with my principles as I enunciate them. I would only ask for short and clear objections or arguments or criticisms and I will promise to deal with them as shortly, for the whole subject is a large one.

I am, Sirs, yours faithfully,

London, Dec. 31st, 1899. HAYDN BROWN.

## "THE MURMURS OF MITRAL STENOSIS."

*To the Editors of* THE LANCET.

SIRS,—Dr. E. M. Brockbank has lately published a small book[1] under the above title in which he has advanced the following theory: "That the true crescendo murmur of mitral stenosis is of early systolic rhythm and is formed by blood regurgitating through the stiff jaws of the stenosed valve, whilst they are abnormally slowly closing under the rising force of intra-ventricular pressure generated by the earliest phase of the ventricle's contraction." It is quite possible that if such changes in the cardiac mechanism occur they might produce the sound referred to, for Dr. Brockbank's tube experiment, which I have carefully repeated, seems to reproduce the crescendo murmur admirably.

Unfortunately, Dr. Brockbank's theory demands that the valve jaws should be stiff, even sufficiently so to make them close late. The crescendo murmur of mitral stenosis should presumably be absent, therefore, when these valves are not stiff and present when they are, though no such relationship has ever, so far as I know, been traced between the mere rigidity of a valve as seen post mortem and the previous history of a crescendo murmur. Moreover, as the thickening and stiffening of a stenosed valve increases as the disease progresses, it should be, on Dr. Brockbank's theory, late in the disease that the crescendo murmur should be heard, which is by no means its characteristic. Dr. Brockbank's contention that the murmur whose mode of production he has attempted mechanically to explain is ventriculo-systolic in origin and regurgitant revives what he correctly terms the old "heterodox theory." As I had previously maintained in several published papers[2] that the portion of the crescendo murmur which is ventricular-systolic in time is nevertheless auricular-systolic in origin, Dr. Brockbank has taken some pains at the commencement of his book to show the absurdity of my views. He states, or rather mis-states, my theory thus: "Samways believes that the abnormally powerful contraction of the auricle prevents regurgitation in compensated mitral stenosis and, further, that the auricle may even be strong enough to force blood into the ventricle after contraction of the latter has begun." This extract from Allbutt's "System of Medicine" is unfortunate. I have never written anything about an "abnormally powerful" contraction of the auricle and cannot help wishing that Dr. Brockbank had looked up my original paper and not argued from a digest which misrepresents me.

There is nothing "abnormal" about the fact that the auricle under certain conditions of size should be able to exert a greater pressure on its contents than the ventricle can. Is it "abnormal" that the small piston of a Bramah press should be able to force up the larger? The auricle has even greater mechanical advantages than the press in that as its size decreases its walls also become more curved and their contraction more effective in consequence. Dr. Brockbank says: "Woods also gives mathematical reasons for believing Samways' theory of the greater strength of the auricular as compared with that of the ventricular contraction to be absurd." This is hard on Woods as well as on me. Woods[3] says that for a hollow sphere with thin walls "the pressure on the contents varies inversely as the cube of the radius when the exertion of each individual fibre is taken as constant." Replace the word "sphere" by auricle, as you fairly may when the latter contracts, and this mathematical result is true with sufficient approximation for the purpose of my theory. It was for a different reason that Woods considered my theory absurd—viz., that there are no valves between the auricle and pulmonary veins—and he presumed that if the intra-auricular pressure tended to considerably increase, the leak towards those veins would prevent the rise of blood-pressure in the auricle which otherwise for physical and mathematical reasons must be produced. The objection is valid and my theory is absurd as regards practical application if the veins are thus unprotected. Inasmuch, however, as they are sphincterec and shut by sphincter action near the auricle when the latter contracts the presence of valves there at all would be superfluous except to prevent misconceptions.

If Dr. Brockbank will carefully reconsider the question he will see, I think, that his view of the mechanical production of the crescendo murmur in mitral stenosis cases would be more easy to uphold if with me—who first advocated it—he considered the blood as still flowing onward into the ventricle in early ventricular time and gave up his heresy of a regurgitant murmur.

I am, Sirs, yours faithfully,
D. W. SAMWAYS, M.D., M.R.C.P.

Mentone, Dec. 28th, 1899.

[1] The Murmurs of Mitral Disease, by E. M. Brockbank.

[2] The Influence on the Action of the Auricle of Variations in its Capacity, Brit. Med. Jour., Jan. 23rd, 1897. Cardiac Peristalsis: its Nature and Effects, THE LANCET, April 2nd, 1898.

[3] Letter to Brit. Med. Jour., March 6th, 1897 (see also March 13th, p. 703, and March 20th, p. 767).

## "A MODIFICATION OF THE ARONSON AND PHILLIPS STAINING METHOD AND ITS APPLICATION IN THE CASE OF MALARIAL BLOOD."

*To the Editors of* THE LANCET.

SIRS,—I shall feel obliged by your allowing me through the medium of THE LANCET to apologise to Mr. W. C. C. Pakes in reply to his letter published in your issue of Oct. 14th. I had read his article in the *Journal of Tropical Medicine* for February, 1899, but had quite forgotten that he suggested the "application of Manson's smearing method to cover slips."

I am, Sirs, yours faithfully,
EDWARD G. HORDER.

Pakhoi, Nov. 16th, 1899.

## NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

*Changes in the Army Medical Services.—The Disastrous Landslips at Darjeeling.—"Information" for Civil Surgeons.*

IT is reported that the War Office authorities have requested the India Office to increase the pay of junior medical officers of the Royal Army Medical Corps serving in India, as the British Medical Association has advised the authorities that much of the continued unpopularity of the corps is due to the fact that junior medical officers are paid less in India than they receive at home or in the colonies. The Indian Medical Association (a pro-native organisation) has also made representations to the Government of India asking that the competitive examinations for the Indian Medical Service may be held simultaneously in London and Calcutta and that graduates of Indian universities may be eligible for competition. It is thought that if the latter service should become unpopular among young English graduates, the authorities may avail themselves of this suggestion. But it must not be forgotten that the Indian Medical Service is primarily a military one. The common-sense view of the present situation would appear to be that the supply of suitable men from home must be obtained by keeping the service attractive. Better terms must be offered, especially to the younger men, and any further encroachments on the civil appointments of that service for the benefit of the native members would certainly not tend to increase its popularity with Europeans.

The committee of experts appointed to inquire into the Darjeeling disaster have issued their report. This terrible accident occurred on Sept. 24th and 25th and resulted in the death of 72 persons, 10 of whom were European children. The hills are formed of biotite-gneiss, but the disposition of the foliation planes has no constant connexion with the recent landslips which are merely slips of the superficial covering of decomposition products—the "soil-cap" formed by normal weathering of the gneiss. Throughout the eastern slopes of the Gellapahar ridge an angle of 41 degrees is frequently found. The angle of repose is less than this and therefore earth slopes of this "soil-cap" of 41 degrees must be regarded as decidedly unsafe and liable to slide on the access of water. This, then, is just what happened after the unprecedented rain of Sept. 24th and 25th. The heavy rain was so very excessive and so sudden that the whole series of phenomena in such slips, from the preliminary creep to the final catastrophe, followed one another too rapidly to permit of the usual premonitory warnings. There seems to be going on at the foot of many of these hills a constant undermining so that the slopes are at times temporarily increased. There is also a slow creep in every inclined "soil-cap" with the regular succession of wet and dry seasons. At last the conditions of stability are exceeded and a landslip occurs to restore equilibrium. Limits of stability have been established for slopes in different materials under various degrees

of saturation, and the report therefore states that the rules so determined should not be superseded by the necessarily limited experience of any local authorities.

There appears to have been no evidence of earthquake as at first reported. Local tremors, however, may have been felt as the result of the heavy landslips. The excessive fall of rain at the final stage of a severe cyclone and at the end of the rainy season is sufficient to account also for the simultaneous occurrence of the large number of landslips in and near Darjeeling. The other contributory causes are reported to be "defective site drainage, excessive lead of road drains, imperfectly or badly constructed revetments, neglect to reduce or protect steep slopes, and undercutting steep slopes for the formation of paths, roads, and outhouses." The committee recommend the following measures to be taken to minimise the chances of future damage. Better drainage, especially of roads along slopes, a special preparation of sites for dwellings, treatment of ravines and springs, reduction of slopes above and below house sites to an inclination not exceeding 37 degrees, the planting of trees, and the improvement of revetments. In addition the committee recommend certain prohibitions concerning quarrying, cutting paths, roads, and sites for buildings, and other works. The importance of Darjeeling as a hill station for Calcutta has demanded this searching inquiry, and it is estimated that at least one and a half lakhs of rupees will be required to repair damages and to carry out the necessary protective works.

While the plague has been abating during the past few weeks larger and larger areas have been suffering from famine. In Bombay city the mortality from plague has only slightly risen, but the general mortality has gone up with great rapidity and this increase forebodes ill. In Calcutta also the general mortality is decidedly above the average and there were more deaths returned from plague.

The futility of laymen reporting upon medical matters has been pointed out over and over again, and the following extract from a recent circular sent to civil surgeons and others under Government authority is noticeable. The author writes on the "Rôle of Rats" in plague, and says, "It is by feeding on the residual matter in the excrement of plague-infected persons that rats acquire the disease; they then transmit it to one another. From rats it is conveyed to human beings by articles of food such as ghee, oil, sugar, milk, butter, &c. Plague is transmissible through the air or by personal contact." It is said that this document is being circulated by the Government to all civil surgeons "for information." I trust that this is a mistake and that it is only confined to the Hyderabad State, from which it appears to emanate. I should also like to express a hope that the Sanitary Commissioner has not sanctioned its circulation.

Dec. 14th.

## LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

*The Royal Infirmary and Sick and Wounded Soldiers: A Patriotic Offer.*

THE committee of the Royal Infirmary are desirous of assisting the War Office authorities in the pressure of hospital accommodation experienced during the present crisis. They have offered to place 12 or more beds at the disposal of that department for sick and wounded soldiers invalided from South Africa who may belong to the Liverpool district. The example which has been set by Liverpool's premier charity has, I understand, already borne fruit, one or more of the other local general hospitals having decided to assist the Government in a similar manner.

*Proposed Legislation by the City Council for the Prevention of Tuberculosis from the Milk-supply.*

The City Council are promoting an Act in the next session of Parliament by which powers are sought for dealing with the milk-supply in Liverpool with reference to the suspected presence of tuberculosis. If on analysing a sample of milk taken from any city shippon the tubercle bacillus is discovered, the medical officer of health is to be empowered to have the cows milked under inspection and to have separate samples analysed. On the detection of the consumptive cows the owner is required under penalty by the Act to isolate them, and is prohibited under a penalty not exceeding £10 from selling any milk taken from such cows. With reference to the milk coming from country dairies, if the tubercle bacillus is detected in milk sampled at a railway-station or from a cart in the street, or at a milk-dealer's, the medical officer of health, on discovering the dairy from which this milk has been sent out, may apply to, and obtain an order from, a justice of the peace in the district where the dairy is situated and under such order may have the cows milked under inspection. If any cows are found to be infected the medical officer may obtain an order from a city justice prohibiting the sale within the city of milk coming from that dairy until such time as he is satisfied that the danger of infection has passed away. The penalty for an infringement of the Act is £10. On production of satisfactory proof that his cattle are free from tuberculous disease the cowkeeper or farmer may himself apply to have the order rescinded. Another clause in the Act imposes a fine not exceeding 40*s.* on cowkeepers within the city for failing to notify cases of tuberculosis. It will be impossible to enforce this clause in the Act unless it can be proved that the owner of the cow or cows was aware of the presence of tuberculosis in the animal. In its early stage, when no external symptoms present themselves, the owner has no means of detecting its presence.

*The Rating of Liverpool Charities.*

The Finance Committee of the City Council have decided to inform the managers of the various hospitals and charitable institutions in the city that they are unable to exempt hospitals from the payment of rates. They are, however, prepared to receive the rates on whatever assessment may be placed on the properties by the Poor-law authorities. The hospitals have hitherto been assessed by the magistrates at *nil*.

*The late Dr. Robert Robertson.*

It was with sincere regret that the medical profession of Liverpool received the intelligence of the death of Dr. Robert Robertson on Dec. 22nd, 1899, after a very short illness. Dr. Robertson graduated as M.D. in the University of Edinburgh in 1863. In 1865 he was appointed a resident medical officer at the Liverpool Workhouse, to which he was subsequently appointed physician upon the retirement, in 1891, of the late Dr. Robert Gee. He was also physician to the Netherfield-road Fever Hospital and to the Liverpool Consumption Hospital, in all of which posts his services were held in the highest esteem. Sympathetic allusions to the late Dr. Robertson were made by Mr. William Rathbone and others at the recent meeting of the Select Vestry, by whom his services were highly valued.

*Liverpool Workhouse Hospital.*

For the post of physician to the workhouse hospital rendered vacant by the death of Dr. Robert Robertson some excellent candidates are in the field. Besides being a lucrative appointment, the post is a very valuable one from a clinical point of view. The opportunities which it affords for research work are exceptionally great owing to the large number of cases admitted to the wards. There is a strong feeling in the profession that the appointment should be given to the fittest candidate, in fact to one who could make use of the extensive field for work available at the hospital. It would be a great misfortune if creed or political influences should debar a first-class candidate from obtaining the desirable post.

Jan. 2nd.

## SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

*Edinburgh Royal Infirmary: Annual Report.*

THE annual report of the managers of the Edinburgh Royal Infirmary to the committee of contributors states that 9694 patients were treated in the wards during the year—an increase of 260 on the number in the previous year. In the out-patient department 29,439 patients had been treated, this being an increase of 510 as compared with last year. The ordinary receipts, which amounted to £30,739 10*s.* 7*d.*, showed an increase of £355 10*s.* 11*d.* over the returns for the previous year. In voluntary contributions there was an increase of £510 1*s.* 9*d.* The ordinary expenditure amounted to £43,882 3*s.* 11*d.*, being a

net increase of £1996 15s. 10d. over that of the preceding year. The explanation of this advance appears to be that the patient's dietary is now more generous and varied, while more meat, milk, &c., have been consumed in the nurses' home. The cost per annum for each occupied bed for maintenance was 13s. 9½d. more and for medical expenditure 2s. less than in the previous year. The extraordinary receipts, consisting of donations and legacies of £100 and upwards, amounted in all to £68,006 6s. 9d. The managers have resolved to commemorate the names of those who have given large bequests to the infirmary by placing tablets over certain medical and surgical beds in the institution. The names of Sir James Nasmyth of Posso, Sir William Fraser, K.C.B., and Mr. David Gavin Hewit will be those first commemorated in this way. The Home of Rest at Colinton had, in compliment to Mr. Patrick Blair, W.S., convener of the House Committee, been named Blair House. It was much appreciated by the nursing staff. Difficulty had been experienced in getting a sufficient supply of servants for the various departments, so that charwomen had to be employed more than was desirable. As regarded the new pavilions it was expected that the gynæcological pavilion would be ready for occupation by Oct. 1st, while the work of erection of the pavilions for diseases of the eye and of the ear, throat, and nose would be commenced almost immediately. This report was adopted at the annual general meeting of the committee of contributors to the Royal Infirmary held on Jan. 1st. In moving the adoption of the report the chairman mentioned that a couple of days ago the managers had received a letter from the Secretary of State for War asking if they could receive a number of disabled soldiers from the front and if so how many and on what terms. The managers expected to come to a decision at their next meeting, their feeling at present being that they ought to meet this demand as far as possible. He feared, however, that in order to discharge their duty satisfactorily they would be obliged to appeal to the public to furnish funds for providing sufficient hospital accommodation for a considerable number of disabled Scottish soldiers, but if this were found to be necessary it was certain there would be a liberal response from the citizens of Edinburgh. The motion was seconded by Mr. Patrick Blair, W.S., and was adopted by the meeting.

*Death of an Old Official of the Edinburgh Royal Infirmary.*

The death occurred on Dec. 27th of Mr. David Ramage, chief porter to the Royal Infirmary, Edinburgh. Mr. Ramage, who was an old soldier, was in his sixty-fifth year and was one of the most trusted officials in the infirmary. He was held in great respect by the new generation of men in his regiment and his body was buried with full military honours. Half a squadron of the Scots Greys were in attendance as well as the band and pipers of the 3rd Battalion of the Gordon Highlanders which is at present in the Castle.

*Drugging with Chloral.*

At a sitting of the High Court of Justiciary held in Glasgow on Dec. 29th a case was heard before Lord Pearson in the New Court in which the prisoner, a man, was accused of having administered chloral to an old man, aged 69 years, and of having robbed this man of a sum of money while he was in a stupefied condition. The accused was found guilty and was sentenced to three years' penal servitude. On being taken to the police-station a phial containing a solution of chloral and a packet with crystals of chloral had been obtained from him. Sir Henry Littlejohn stated that the phial contained 29 grains of chloral in solution, while the powder consisted of 12 grains of pure chloral. He regretted that there was such facility in obtaining this drug. It only required to be labeled and might be bought by a little child.

*New Asylum for the Edinburgh District Lunacy Board.*

This board have acquired lands in the County of Linlithgow for the purpose of erecting thereon an asylum for the immediate accommodation of 600 patients, but capable of extension. The new asylum is distant nearly three miles from Uphall Railway Station and the board have promoted a private Bill in Parliament in which they ask authority to construct a railway between the asylum and the station on the ground that it will conduce to economy and convenience. Power is also asked to construct waterworks for the supply of the asylum and for sewerage works on an elaborate scale. Power to borrow money on the security of the assessments is also sought.

*Typhoid Fever Epidemic in Ayr.*

On Dec. 29th it was announced that there had been four further notifications of cases of typhoid fever in Ayr during the preceding 24 hours. It had been hoped that the progress of the epidemic had been checked and the occurrence of fresh cases is disappointing. The total number of cases is now 154. It has been decided that all the soiled linen, not only from the hospitals, but also from the patients' houses, shall be washed and disinfected at the Ayr County Hospital.

Jan. 2nd.

## IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

*Surgical Appointments in South Africa.*

AFTER a farewell interview with his Excellency the Lord Lieutenant on Friday, Dec. 29th, at the Viceregal Lodge, Sir William Stokes was to leave Dublin on Thursday, Jan. 4th, and to sail for the Cape on Saturday, the 6th. Dr. Kendal Franks, recently of Dublin, has also been appointed an additional consulting surgeon with the army in South Africa. Dr. Franks is, as you have already stated in your columns, already at the seat of war. Sir William Thomson is stated by the *Irish Times* of Jan. 1st to have just accepted the charge as consultant of a special hospital in South Africa.

*Death of Mr. Humphrey J. Broomfield, F.R.C.S. Irel.*

Mr. Broomfield, whose death took place on Dec. 30th, was formerly well known in Dublin as a Fellow and member of the Council of the Royal College of Surgeons in Ireland, and as assistant physician to the City of Dublin Hospital. He was much distinguished in connexion with the teaching of anatomy, and filled for a period the position of College Anatomist to the Royal College of Surgeons in Ireland. Some years ago he accepted the position of surgeon to the Carlow County Infirmary and commenced practice in that town. His death at a comparatively early age has caused much regret among his many friends.

*Irish University Education.*

The present unsatisfactory condition of Irish University education has again been raised in a very able letter to the papers by Dr. W. A. McKeown, a member of the Senate of the Royal University of Ireland. He first points out how the experiment of the Royal University of Ireland has worked from the time of its establishment in 1881. In that year 72 candidates graduated as M.D. (of these 34 were from Queen's College, Belfast) and 62 as B.A. (of these 33 came from Queen's College, Belfast). In the previous 10 years 536 persons obtained the M.D. degree in the Queen's University (53 per annum) and 436 the degree of B.A. (43 per annum). In the Royal University of Ireland degrees are given in arts by examination, no attendance on college lectures being compulsory; in medicine certificates of attendance on lectures and at hospital are obligatory. Further, it is well to remember that one-half of the Fellowships and examinerships have been given by the Senate of the Royal University of Ireland to one body — the Catholic University of Dublin; while the other half go to the Queen's Colleges and Magee College with a few exceptions, allowing eight years to elapse so as to have a settled working basis established. Dr. McKeown gives the following remarkable results of the examinations at intervals of five years:—

*Table showing the Number of Students from the Colleges associated with the Royal University of Ireland, and from other Colleges and Schools; also the Number of Private Students who have obtained the Degree of B.A. in the Years 1889, 1894, and 1899.*

| | 1889. | 1894. | 1899. | Total in three years. |
|---|---|---|---|---|
| Queen's College, Belfast ... ... ... ... ... | 23 | 23 | 32 | 78 |
| Queen's College, Cork... ... ... ... ... ... | 4 | 2 | 4 | 10 |
| Queen's College, Galway ... ... ... ... ... | 7 | 7 | 7 | 21 |
| Magee College, Derry... ... ... ... ... ... | 3 | 5 | 3 | 11 |
| Catholic University College, Dublin ... ... | 4 | 13 | 13 | 30 |
| Mixed—i.e., when a student has attended different colleges ... ... ... ... ... ... | 4 | 5 | 3 | 12 |
| Other schools and colleges ... ... ... ... | 49 | 43 | 69 | 161 |
| Private students ... ... ... ... ... ... ... | 32 | 33 | 26 | 91 |
| No information ... ... ... ... ... ... ... | — | 6 | — | 6 |
| | 126 | 137 | 157 | 420 |

*Table showing the Number of Students from various Medical Schools who have obtained the Degrees of M.B., B.Ch., and B.A.O. (equivalent to the M.D. of the Queen's) in the years 1889, 1894, and 1899.*

| | 1889. | 1894. | 1899. | Total for three years. |
|---|---|---|---|---|
| Queen's College, Belfast ... ... ... ... | 32 | 21 | 27 | 80 |
| Queen's College, Cork ... ... ... ... ... | 15 | 8 | 11 | 34 |
| Queen's College, Galway ... ... ... ... | 2 | — | 1 | 3 |
| Catholic University Medical School ... ... | 6 | 5 | 10 | 21 |
| School of Physic, Trinity College ... ... | 5 | 1 | — | 6 |
| Royal College of Surgeons in Ireland ... | — | 1 | — | 1 |
| London School of Medicine for Women ... | — | 1 | — | 1 |
| Durham University... ... ... ... ... ... | — | 1 | — | 1 |
| Mixed returns ... ... ... ... ... ... ... | 10 | — | 2 | 12 |
| | 70 | 38 | 51 | 159 |

These statistics show that all the Queen's Colleges have been impaired in their usefulness by the establishment of the Royal University of Ireland. The arts faculty in Cork has been ruined and in Galway it has diminished one half, and the medical faculty in Cork is about half what it was, while in Galway it is destroyed. Further, these figures, Dr. McKeown contends, show that both in arts and medicine the Catholic University College, Dublin, and Catholic University Medical School, notwithstanding their predominant position and influence, have failed to show the return of graduates which surely was expected by the Government in establishing the Royal University of Ireland. In fact, from that point of view, the Royal University of Ireland has been a failure. But, further, these figures demonstrate that in the arts faculty the great majority of students graduating in the Royal University of Ireland have studied in colleges or schools not associated with the university, or have studied privately, for in the three years tabulated no less than 252 out of a total of 420 who took the degree of B.A. did not study in any of the colleges associated with the university. Many of these colleges and schools have been brought into existence or have been given a great impetus by the Royal University of Ireland, and some have come out most creditably both in the honour and pass lists. Queen's College, Belfast, has suffered in both the arts and medical faculty by the establishment of the Royal University of Ireland. The injury to the arts school is not due, as it is in the medical faculty, to the constitution of the board of examiners and the unfair influence (in the relative number of examiners) of one Dublin school, but mainly owing to the opening of the arts degree to all comers without obligatory attendance on lectures. The students graduating in arts from "private study" and from "other colleges and schools" in the Royal University of Ireland are one and a half times as numerous as those from all the privileged colleges put together. The Queen's Colleges founded by the Government have been starved by the Government. The chairs are not properly endowed, and no provision is made for assistant professors or for tutors. The very fact that the colleges are Government institutions and controlled far too much in the past by subordinates in Dublin who delight in religious and political intrigue, have prevented the people in their vicinity endowing them as they would, had they been in the position of the University of Edinburgh or the University of Glasgow. Dr. McKeown suggests another in addition to the many plans previously put forward to settle this most difficult question. His method may be styled, "Local Government of the Queen's Colleges." He advises that the governing bodies of the Queen's Colleges should be made as far as possible representative, and that they should be properly endowed, cut off from Government interference in their management, and made local. The North of Ireland would have a board to please itself, the West and South the same. In this way the people of the districts in which the colleges are located would take a real interest in them. The governing board might contain representatives of the teachers and of the graduates, official representatives of some public bodies, and eminent persons in thorough sympathy with the colleges. Were the colleges in the position in which they ought to be, local, democratic, and endowed, Dr. McKeown thinks that then a re-organisation of the Royal University of Ireland, after the manner of the University of London, might be seriously entertained. Whether Dr. McKeown's plan will "catch on" or not, one thing is clear to everyone, that nothing could be more unsatisfactory than the present condition of college and university education in Ireland. The man who would solve such a question would indeed confer a lasting benefit on Ireland and be a true patriot.

*Influenza.*

For the past few weeks cases of mild influenza have occurred in Belfast, but since Christmas it has assumed a widespread epidemic form and the type of the disease is distinctly worse than in the influenza which prevailed last year. Pulmonary complications are met with most frequently and the death-rate in elderly patients has been very high. The weather, too, has been most trying, days of frost being immediately followed by the mildest spring-like weather.

*Death of a Medical Man from Accidental Poisoning.*

Mr. William J. Belcher, for many years the medical officer to the Union Hospital, Bandon, co. Cork, was poisoned on Dec 30th by a dose of dilute carbolic acid which he accidentally swallowed in mistake for a draught of fluid magnesia. Although the accident occurred at 1 o'clock in the day, and although skilled medical assistance was summoned with the utmost possible despatch, death had taken place before Dr. Reid arrived. It would seem that nowadays, and in these countries, carbolic acid is by far the most frequent and fatal of poisons.

Jan. 2nd.

## PARIS.

(FROM OUR OWN CORRESPONDENT.)

*Operations on Lunatic Patients in Asylums.*

THIS very grave question has been under discussion at the Society of Legal Medicine, the subject having been introduced some six months ago in an important paper by M. Picqué and M. Briand. They came to the conclusion that the surgeon should only interfere in cases of absolute urgency. M. Leredu, a barrister, sent in a report to the society on the question formulated as follows:—"Is a surgeon within his rights in performing a surgical operation upon a lunatic without the consent of the patient's relatives?" He answered in the negative, except in a case of absolute urgency. A lunatic is unable to give consent, it is his relatives who must give consent to the operation. But the relatives may refuse consent, possibly from fear of an unsuccessful result, or on the other hand, with the deliberate wish to deprive a person who is a disgrace and expense to them of a chance of life. Again, the relatives may not choose to answer, or the lunatic may have no relatives. It is, then, the legislature that must be asked to supply an answer to the question. It would be easy to settle it by an enactment drawn in some such terms as these: "When a surgeon is of opinion that surgical interference is called for in the case of a person who is an inmate of a lunatic asylum he shall obtain leave to operate from the relatives of the patient. In case the relatives refuse the director of the asylum shall at once inform the Procureur of the Republic. This official shall put the tribunal in possession of the facts, whereupon it may rule the case to be one of urgency and the proposed operation to be a last resource, making the order in the Chambre de Conseil, after having referred the matter, should it think fit, to medico-legal experts for an opinion as to the propriety of surgical intervention." M. Picqué, in supporting the opinion of M. Leredu, showed how difficult it was to obtain a really valid consent from relatives. In 20 cases where he applied for leave he received but one answer. The disagreeable consequences (which may arise to a surgeon through operating without consent being taken for granted M. Picqué would only dispense with such consent in the three following instances: suffocation, strangulated hernia, and arterial hæmorrhage. There might be others, such as metrorrhagia and conditions associated with the urinary organs, but so long as the matter was not settled, either by statute or by a resolution of the society, he would not interfere, unless he had some authorisation in writing, for fear of incurring both moral and material responsibilities which in France were very grave. If the patient were to die his relatives, who had shown themselves absolutely indifferent when permission was asked of them, would not hesitate to claim damages and to attack the surgeon in the public prints. Even if the operation were successful the surgeon would not be free from the risk of disagreeable consequences. In the discussion which followed without any conclusion being then arrived at, it was curious to see the legal members, among whom was M. Jacobi, the Advocate-General, giving their opinion that it was right for the surgeon to operate if he thought it necessary, even

against the wishes of the relatives, while the medical members were less bold and demanded some legal protection to cover their responsibility. As a matter of fact, despite the philanthropic and philosophic views of individual members of the magistracy, the medical profession know only too well how of late these very magistrates have, when sitting in court, shown themselves both severe and unfair towards medical men and how ready they are to entertain complaints from the relatives of patients against their medical advisers.

*Spitting on the Pavement.*

The Sixth Committee of the Municipal Council of Paris has recently had under consideration a proposal laid before it by M. Fortin, a member of the council, suggesting that the populace of Paris should not spit on the footways. The practice is already prohibited in omnibuses, railway-stations, and certain public places. The committee decided, after some discussion, to put up enamelled metal notices, sufficiently large to be read at some distance, in the chief streets and public buildings, bearing the following inscription: "The public are requested, in their own interests and with a view to avoid disseminating infectious diseases, to abstain from spitting on the pavement."

Jan. 3rd.

## BERLIN.

(FROM OUR OWN CORRESPONDENT.)

*Statistics of the Medical Profession.*

ACCORDING to Börner's Medical Directory, edited by Dr. Schwalbe, the number of medical men in Germany is 26,689. The *Deutsche Medicinische Wochenschrift* states that since the previous enumeration there has been an increase of 932—i.e., 3·6 per cent. Of these medical men 16,103 reside in Prussia, 2947 in Bavaria, 1968 in Saxony, 870 in Würtemberg, 1027 in Baden, 661 in Hesse, 766 in Alsace-Lorraine, and the remainder in the other states of the confederation. During the last 11 years the medical profession has increased 56 per cent., whereas the number of the population has increased only 14 per cent. In 1887 there was one medical man for 3000 persons, but in 1898 there was one for 2197 persons. The most considerable increase during the last 11 years was in the medical officers to hospitals, clinics, laboratories, &c., their number having risen from 581 to 1924, an increase of 232 per cent., whilst the general practitioners increased 52 per cent. and the army and navy medical officers 21 per cent. It is remarkable that in 1887 as many as 57 per cent. of the army and navy medical officers were engaged in civilian practice, but in 1898 only 31 per cent. With regard to the geographical distribution of the profession it is stated that the eastern districts have far fewer medical men than the southern and western districts. Berlin has of course the greatest number of medical men—viz., 2233; Munich, 637; Hamburg, 533; Breslau, 510; Leipsic, 411; Dresden, 408; Cologne, 332; Frankfort, 312; Charlottenburg, 298; Königsberg, 250; Hanover, 234; and Strassburg, 234. Of the Berlin medical men two were qualified in 1842, two in 1843, and four in 1844. More than 46 per cent. of the Berlin members of the profession became qualified during the last ten years.

*The Institution for Infectious Diseases.*

Professor Brieger, the head of the clinical department of the Institution for Infectious Diseases, is resigning this appointment to become professor of general therapy at the University of Berlin. The chair of General Therapy has been created recently; the *Deutsche Medicinische Wochenschrift* rightly observes that theoretical lectures on therapy are not of great value and that the professor of general therapy ought to have wards where he might demonstrate the different methods of treatment. In addition to losing Professor Brieger the staff of the Institution for Infectious Diseases will undergo considerable alterations: Dr. Marx is going to Frankfort, where he has received an appointment at the Institution for Experimental Therapy under Professor Ehrlich; Professor Pfeiffer, the head of the laboratory department, has been promoted to be professor of hygiene at Königsberg. The places of Professor Brieger and Professor Pfeiffer will be taken by Professor Dönitz and Professor Frosch, the German commissioners for the investigation of the plague in Portugal. Professor Koch, who is at the head of the Institute, is still in the Dutch Indies prosecuting studies on malaria.

*Actinomycosis of the Kidney.*

A very rare specimen was recently shown to the Berlin Medical Society by Professor Israel. It was the kidney of an army officer who in 1892, without any obvious cause, was seized with hæmaturia and severe pain in the left lumbar region. In 1894 a surgeon performed nephrotomy on the supposition of the presence of a renal calculus. The kidney proved to be normal, no calculus was detected, but there were firm adhesions to the surrounding parts so that the kidney had to remain *in situ* and was not brought through the wound for inspection. The wound healed without complication, but the urine became opaque and contained blood, the patient had night sweats, and his weight decreased considerably. In 1898 a fistula formed and discharged a small quantity of sero-purulent fluid. In August the fistula was incised without any improvement resulting. Not long ago the patient came under the care of Professor Israel. He was very weak, there were several fistulæ at the old cicatrix discharging pus with granules which proved to be actinomyces, and actinomyces was present in the sediment of the urine. By cystoscopy the mucous membrane of the bladder was found to be normal. Nephrectomy was therefore performed. The lower part of the kidney did not show any alterations; in the upper part there was a yellow tumour consisting of fat with actinomyces; growths of the same kind were also present between the capsule and the kidney. In the pelvis of the kidney there was a calculus consisting of masses of calcified actinomyces. This is the first case of operation for actinomycosis of the kidney.

*Midwives in Berlin.*

The midwives of Berlin are very strictly controlled by the medical officers to the Berlin police. Not long ago a qualified midwife was prosecuted and fined because she had contradicted a medical man in presence of a parturient woman, this being regarded as a misdemeanour because the patient was thereby induced to believe that the medical man in charge was incompetent. The medical department of the Berlin Police has also issued an order to the qualified midwives informing them that it is illegal to recommend individual medical practitioners to women in their confinements, because a law passed in 1725 provides that the patient must be at full liberty to consult any medical man she desires. It is especially against the law for midwives to have an agreement with a medical man and to be paid by him for recommendations to patients.

Jan. 2nd.

## ROME.

(FROM OUR OWN CORRESPONDENT.)

*Hygiene and the Holy Year.*

IN view of the masses of pilgrims who will be quartered in Rome at frequent intervals during the Holy Year the Minister of Foreign Affairs (the Marchese Visconti Venosta) has instructed the Italian consular service throughout the two hemispheres to supply the Government with full and accurate reports as to the sanitary condition of the several countries whence the pilgrimages in question are preparing to start. This is quite a necessary precaution. The central authority is making every effort to obviate the overcrowding anticipated from the influx of so many "caravans" of the faithful. But even before their accommodation in conventual establishments and provisional "baracche" (barracks) becomes a practical question the Government must have satisfactory assurance that they will not import the germs of infective maladies from their several "places of origin" or "points of departure."

*Dr. Mazzoni and the Ceremony of the Porta Santa.*

The solemn inauguration of the Holy Year on Christmas Eve was not without its amusing episodes, prominent among them being that of which Dr. Mazzoni was the hero. His presence at the august ceremony was only less *de rigueur* than that of Dr. Lapponi, but owing to urgent professional engagements he was late in presenting himself. Still worse, he had forgotten to come fortified with the indispensable "biglietto d'ingresso" (ticket of admission). Arrived at the bronze door leading to the Pontifical apartments he was met with the inexorable demand, "Biglietto, signore, biglietto." Hardly hearing or attending to the

reminder, Dr. Mazzoni in his haste was pressing on and in four "leaps or bounds" would have been ascending the staircase, when a heavy hand laid on his shoulder gave him pause and the same voice, rather more sternly, repeated the question, "Fostro biglietto? Foi non capite?" (Your ticket? Don't you understand?) It was the stalwart Swiss Guard whose speech bewrayed him in the accents of Solothurn or Freiburg. Dr. Mazzoni, eager to be in time, could only protest, "Ma che biglietto? Io non ne ho bisogno." (But why a ticket? I don't need one.) "Fostro biglietto! Nessuno passa senza biglietto!" (Your ticket! No one gets through without a ticket) insisted the Guard. "Ma sapéte chi sono?" (But do you know who I am?), rejoined Dr. Mazzoni. "Neppure il nipose del Papa passa senza biglietto. Date dietro!" (Not even the Pope's nephew passes in without a ticket. Keep back!) was the reply of the "invisus janitor," who was just about to point his halberd at the medical man's breast when a high functionary of the Vatican came up and ended the altercation. The "Cerbero Elvetico" (Swiss Cerberus) had to bow to "force majeure" and permit the surgeon who in March last had saved the Holy Father's life to pass on and reinforce his colleague, Dr. Lapponi, as a specially interested "assessor" at the proceedings.

*The Crusade against Malaria.*

Is the sufferer from malaria a source of danger to his healthy neighbours? The question came before the last meeting (on Dec. 27th) of the Società Piemontese d'Igiene and was answered in the affirmative by Dr. Pio Foà, professor of pathological anatomy in the University of Turin. On the strength of recent discoveries, checked by still later experience, Professor Foà maintained that malaria could be indirectly communicated, and his view, strongly supported by the president of the society, Dr. Luigi Pagliani, professor of hygiene in the same university, was unanimously approved by the meeting. There is thus, according to Professor Foà, a fresh prophylactic reason for curing malarious subject, and accordingly he proposed an "order of the day" by which the Government was invited to make provision for the sale of quinine to the fever-stricken poor at cost price. Professor Pagliani, in seconding the proposal, which was ultimately carried, was of opinion that the Società d'Igiene, as it had already interested itself in the various methods devised to combat tuberculosis, should also assume a similar attitude towards malaria and invite the profession and the Congregazioni di Carità to join in the movement indicated. So far so good, but to the proposal for the cheap supply of quinine a *caveat* was added protecting the interest of the pharmaceutical profession—and this was better.

*Re-appearance of the Plague at San Paulo.*

From a telegraphic message received at Genoa and dated "Rio Janeiro, 28th inst," I learn that the pestis bubonica which was thought to have disappeared from San Paulo and its neighbourhood has returned in greater force than ever. Three very marked cases were reported on the 27th and, what is worse, they were found by the physicians to partake of the pulmonary form of the disease, which is not only the most uniformly fatal but also that which is most contagious. In these cases the sputum is always a source of danger, and still more the profuse, watery, often "sanguinolent," exudation, literally swarming with bacilli. As soon as the central authority was advised of this renewed outbreak, the requisite sanitary precautions previously in force were vigorously resumed, no effort being spared to localise the disease. The panic at San Paulo is, of course, immense, but the prompt action of the Government is already restoring calm. At Santos the situation continues unchanged. For 15 days the whole region has been free from the disease.

Dec. 31st.

## VIENNA.

(FROM OUR OWN CORRESPONDENT.)

*Infectious Diseases in Austria.*

THE official statistics of the morbidity and mortality due to infectious diseases in Austria in the year 1898 have just been published. No less than 8674 cases of small-pox with 1594 deaths were recorded. The majority of these cases occurred in the eastern provinces, where the population is least intelligent and where vaccination cannot be carried out as efficiently as in the western provinces. Of the number just quoted 6996 cases (with 1228 deaths) occurred in Galicia and 1627 cases (with 363 deaths) in the Bukowina. In the two districts of Klinaentz and Tontina Alba 335 cases of small-pox occurred among children and four among the adults; of all the patients only two had been vaccinated, but the majority of the adults in these two districts showed small-pox scars as in a population of 2306 adults 1532 persons were found to be marked with small-pox. During 1898 there were also recorded 15,344 cases of scarlet fever (with 9651 deaths), 198,435 cases of measles (with 9179 deaths); 24,131 cases of typhoid fever (with 3544 deaths); 4147 cases of typhus exanthematicus (with 362 deaths); 6318 cases of dysentery (with 1266 deaths); 1566 cases of puerperal fever (with 846 deaths), and 32,296 cases of diphtheria (with 9095 deaths). Of these cases of diphtheria 15,333 were treated with serum injections and of that number only 2428 died, giving a mortality of 15·89 per cent; whilst among 16,963 cases treated without serum 6667, or 39·30 per cent., succumbed. These figures seem to be in favour of the serum treatment in diphtheria.

*Plague on an Austrian Steamer.*

The Austrian Lloyd steamer *Berenice*, which recently arrived with a cargo of coffee from Brazil at Trieste, was infected with plague in a Brazilian harbour and four cases of plague occurred on board during the voyage. As the cargo represented a value of more than 2,000,000 florins the opinions of sanitarians and of the public were divided as to the precautions which should be taken under the circumstances. The ship was taken to the Trieste quarantine station and all on board were conveyed to the Trieste Lazaretto for infectious diseases, where they are isolated and will remain for a fortnight. It has not yet been decided whether the coffee will be thrown into the sea, as is demanded by the majority of the public in the fear that the infection of plague will be dispersed throughout the country by selling it, or whether it will be transferred to new bags, or whether it will be sufficient to treat the bags with a disinfectant before sending the coffee to the market. Some medical authorities have recommended the strongest measures, while others seem to be content with less destructive procedures which would not entail the loss of these 2,000,000 florins.

*New Rules for Examinations in Medicine.*

Within the next few days the new rules for the qualifying examinations in medicine will be issued. The principal changes will be that the so-called preliminary examinations in zoology, botany, and mineralogy will be abandoned. The first examination will include biology, anatomy, physiology, natural philosophy, chemistry, and histology. Mental diseases, diseases of the ear, hygiene, and dermatology have now been added to the list of subjects comprised in the two final examinations.

Jan. 1st.

# Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen having passed the necessary examinations and having conformed to the by-laws and regulations have been admitted Fellows and are arranged in order of seniority as Members of the College, viz.:

Hugh James Moore Playfair, M.D. Lond., M.R.C.P. Lond., King's College Hospital, Member July 31st, 1890; Herbert William Carson, L.R.C.P. Lond., St. Bartholomew's Hospital, Member July 29th, 1895; Evan Lancing Evans, M.A., M.B., B.C. Cantab., L.R.C.P. Lond., Cambridge University and St. Bartholomew's Hospital, Member Nov. 14th, 1895; Percy Samuel Lelean, L.R.C.P. Lond., St. Mary's Hospital, Member Nov. 14th, 1895; John Howell, M.B. Lond., L.R.C.P. Lond., Guy's Hospital, Member Feb. 13th, 1896; William Francis Victor Bonney, M.D., B.S. Lond., L.R.C.P. Lond., Middlesex Hospital, May 14th, 1896; Thomas Rupert Hampden Bucknall, M.D. Lond., L.R.C.P. Lond., University College Hospital, Member August 4th, 1896; Wilfred Batten Lewis Trotter, M.D. Lond., L.R.C.P. Lond., University College Hospital, Member August 4th, 1896; Arthur Murray Cudmore, M.B., Ch.B. Adel., L.R.C.P. Lond., Adelaide University and London Hospital, Member Nov. 12th, 1896; Charles Ralph Keyser, L.R.C.P. Lond., St. George's Hospital, Member August 4th, 1896; Gilbert Smith, M.B. Durh., L.R.C.P. Lond., Durham University and St. Bartholomew's Hospital Member, August 4th, 1896; Rodolph de Salis Stawell, B.A., M.B., B.C. Cantab., L.R.C.P. Lond., Cambridge University and St. Bartholomew's Hospital, Member August 4th, 1896; John William Thomson Walker, M.B., C.M. Edin., L.R.C.P. Lond., Edinburgh University and Middlesex Hospital, Member, August 4th, 1896; Herbert Mundy, L.R.C.P. Lond., St. Bartholomew's Hospital, Member May 13th, 1897; Robert Gow Ralston,

M.B., C.M. Edin., L.R.C.P. Lond., Edinburgh University and St. Bartholomew's Hospital, Member May 13th, 1897; Frank Mannington, L.R.C.P. Lond., Middlesex Hospital, Member July 29th, 1897; Joseph Oliver Skevington, L.R.C.P. Lond., St. Mary's Hospital, Member Feb. 10th, 1898; Edred Moss Corner, M.B., B.C. Cantab., M.A., B.Sc. Lond., L.R.C.P. Lond., Cambridge University and St. Thomas's Hospital, Member May 4th, 1898; Thomas Joseph Patrick Hartigan, L.R.C.P. Edin., St. Bartholomew's Hospital, Member May 4th, 1898; John Law Adams, M.B., C.M. Aberd., Aberdeen University and Middlesex Hospital, Member Nov. 10th, 1898; and Arthur Ferguson MacCallam, B.A., M.B., B.C. Cantab., L.R.C.P. Lond., Cambridge University and St. Mary's Hospital, Member Nov. 10th, 1898.

17 gentlemen were referred to their professional studies.

**The following gentlemen having passed the necessary examinations have been admitted Licentiates in Dental Surgery, viz.:—**

William Bradell Bacon, Middlesex Hospital and the Dental Hospital of London; Horace Willie Paul Bennett, University College, Dental Hospital and Royal Infirmary, Liverpool; John Sydney Biss and John Black, Guy's Hospital, Dental Department and School; Frederick John Blight, University College, Dental Hospital and Royal Infirmary, Liverpool; Charles Henry Bubb and Hugh Tilford Campkin, Guy's Hospital, Dental Department and School; Frank Russell Carey, Mason College, Queen's, General, and the Dental Hospitals, Birmingham; James Thornton Carter, Charing Cross Hospital and the Dental Hospital of London; Percival Pasley Cole, Guy's Hospital, Dental Department and School; Richard Kempe Devonshire, Middlesex and the National Dental Hospitals; Arthur Harvey Dixon, Mason College, Queens, General and Dental Hospitals, Birmingham; George Herbert Drake, Guy's Hospital, Dental Department and School; Henry Frankish, Owens College, Royal Infirmary, and Victoria Dental Hospital, Manchester; William John Duncalf, Charing Cross Hospital and the Dental Hospital of London; Francis Wilberforce Garman, Guy's Hospital, Dental Department and School; Samuel Hargreaves, University College, Dental Hospital and Royal Infirmary, Liverpool; Francis Walsh Horrocks, Owens College, Royal Infirmary, and Victoria Dental Hospital, Manchester; Sydney Herbert Jones and William Watkins Cadwaladr, Jones, Guy's Hospital, Dental Department and School; Thomas Henry Paul Kolesar, University College, Dental Hospital, and Royal Infirmary, Liverpool; Reginald Frederick Lockett, Middlesex and the National Dental Hospitals; Sidney Herbert Longhurst, Guy's Hospital, Dental Department and School; Frederick Mackenzie, Owens College, Royal Infirmary, and Victoria Dental Hospital, Manchester; Harold Maurice, Guy's Hospital, Dental Department and School; Frank Webster Spence Metcalfe, Charing Cross Hospital and the Dental Hospital of London; Richard James Morrell and Jonathan Baron Morrish, Guy's Hospital, Dental Department and School; George Herbert New, Middlesex Hospital and the National Dental Hospital; Hugh Gwilym Owen, University College, Dental Hospital, and Royal Infirmary, Liverpool; Santiago Luis Paliant, Rudolph Peacock, and Frank James Pearce, Guy's Hospital, Dental Department and School; Harold Goodwin Perkins, Middlesex Hospital and the Dental Hospital of London; Charles Fox Pitt, Charing Cross Hospital and the Dental Hospital of London; Gerald Paton Pollitt, Guy's Hospital, Dental Department and School; Arthur Rice, Charing Cross Hospital and the Dental Hospital of London; Charles Frederic Rose, Guy's Hospital, Dental Department and School; Leonard Francis Vale Sadler, Mason College, Queen's, General, and the Dental Hospitals, Birmingham; Arthur Harold Saunders, Guy's Hospital, Dental Department and School; George Curnock Sawday, Charing Cross Hospital and the Dental Hospital of London; John William Sidebottom, Owens College, Royal Infirmary, and Victoria Dental Hospital, Manchester; Ernest Sturridge, College of Dentistry, New York, and University College, London; William Henry Tattersfield, Guy's Hospital, Dental Department and School; Edward Thorne, Middlesex and the National Dental Hospitals; Sidney James St. Helier Tweney, Guy's Hospital, Dental Department and School; Sidney Dunstan Venning, Middlesex and the National Dental Hospitals; George Gray Vincent, Charing Cross Hospital and the Dental Hospital of London; John Hamilton Wilkes, Guy's Hospital, Dental Department and School; Samuel Joseph Willcox, University College, Royal Infirmary, and General Hospital, Bristol; and Joseph Workman, Charing Cross Hospital and the Dental Hospital of London.

27 gentlemen were referred to their professional students, 24 for six months, and three for one year.

**WATER-SUPPLY OF ILFRACOMBE.**—At a statutory meeting of the ratepayers of Ilfracombe held on Dec. 28th, 1899, it was decided to promote a Bill for obtaining a supply of water from Exmoor at an estimated cost of £44,000.

**SMALL-POX AT BARRY.**—A case of small-pox was notified from the Barry Dock district on Dec. 29th, 1899. This is the third case removed to the Isolation Hospital during the past fortnight.

# Appointments.

*Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to* THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.*

ALLPORT, WILFRID, M.B., B.S. Lond., M.R.C.S. & L.R.C.P. Lond., has been appointed Senior House Surgeon to the Birmingham and Midland Eye Hospital.

ANNINGSON, B., M.D. Cantab., M.R.C.S., has been re-appointed Medical Officer of Health by the Cambridge Town Council.

BATEMAN, F. J. HARVEY, B.A. Cantab., M.B., C.M. Edin., has been appointed Resident Medical Officer to the Hertford British Hospital, Paris.

BAUMANN, E. P., M.B. Edin., M.R.C.S. Eng., has been appointed House Surgeon to the Glasgow Maternity Hospital.

BERTRAM, THOMAS DUN, J.P., M.B. Glasg., has been appointed a Member of the Licensing Court, District of Coonamble, New South Wales.

BUCKLEY, J., L.S.A., has been appointed Medical Officer for the Hasland Sanitary District of the Chesterfield, Derby, Union.

CRISP, A., M.R.C.S., has been re-appointed Medical Officer for the Horsey Sanitary District of the Smallburgh Union.

DAVIES-JONES, D., M.B. & M.S. Edin., has been appointed Surgeon to Messrs. Nixon's Collieries, Mountain Ash.

EDDOWES, ALFRED, M.D., M.R.C.P., has been appointed Honorary Physician to St. John's Hospital for Diseases of the Skin, Leicester-square, W.C.

GILES, ARTHUR E., M.D., B.Sc. Lond., M.B., B.Ch. Vict., F.R.C.S Edin., M.F.P.P. Lond., has been appointed Gynæcologist to the Tottenham Hospital.

GILL, F. A., M.D., C.M. Aberd., has been appointed Deputy Medical Officer of the Liverpool Prison.

GOODALL, J. K., L.R.C.P., L.R.C.S. Edin., has been re-appointed Medical Officer for the Heath Sanitary District of the Chesterfield Union.

GOWLLAND, JOHN GEORGE BLANTYRE, L.R.C.P., L.R.C.S. Edin., L.F.P. & S. Glas., has been appointed Resident Surgeon to the Cloncurry District Hospital, Queensland, Australia, vice J. Milne.

HARRIES-JONES, E., M.B., C.M. Edin., has been appointed Resident Surgical Officer to the Birmingham and Midland Eye Hospital.

HUTCHINSON, J. A., M.D. Durh., M.R.C.S., has been appointed Medical Officer of the Northallerton Prison.

JOHNSON, P., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer of Health for the Borough of Stoke-on-Trent.

JONES, T. O., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been re-appointed Medical Officer of Health by the Ruthin Rural District Council.

LAWSON, T. C., M.R.C.S., has been appointed Medical Officer and Public Vaccinator for the Longtown Sanitary District of the Longtown Union.

LEE, B. J., L.S.A., has been re-appointed Medical Officer for the North Wingfield Sanitary District of the Chesterfield Union.

MAITLAND, PELHAM C., M.R.C.S., L.R.C.P. Lond., has been appointed Medical Officer to the Brompton and Knightsbridge Provident Dispensary.

PEARCE, F. H., L.R.C.P. Lond., M.R.C.S. has been appointed Senior Assistant Medical Officer for the Workhouse, Bradford.

PRIOR, SAMUEL, M.B., C.M. Glasg., has been appointed Public Vaccinator for the Kirkheaton District of the Huddersfield Union, vice David Robertson.

ROCHE, T. F., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Penarth Sanitary District.

SAVILLE, THOMAS, M.D., M.R.C.P., has been appointed Honorary Physician to St. John's Hospital for Diseases of the Skin, Leicester-square, W.C.

SEACOMBE, A. F., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Resident Medical Officer of the Workhouse, Toxteth.

SHEPHEARD, J., L.R.C.P. Lond., M.R.C.S., has been re-appointed Medical Officer of Health by the North Walsham Urban District Council.

UNDERHILL, S. V. H., L.R.C.P., M.R.C.S., has been appointed House Surgeon to the Suffolk General Hospital at Bury St. Edmunds.

WORLEY, E. A., M.R.C.S., L.R.C.P. Lond., has been appointed Second Assistant Medical Officer to the St. Marylebone Infirmary, St. Charles-square, North Kensington, vice Archer Browne, resigned.

# Vacancies.

*For further Information regarding each vacancy reference should be made to the advertisement (see Index).*

ABERYSTWITH INFIRMARY.—House Surgeon. Must also act as Secretary. Knowledge of Welsh essential. Salary £150, with the usual residential allowances (stimulants excepted).

ASHTON-UNDER-LYNE DISTRICT INFIRMARY.—House Surgeon. Salary £100 a year, with board and lodging.

BIRMINGHAM AND MIDLAND EYE HOSPITAL, Birmingham.—Assistant House Surgeon. Salary £50 per annum, with apartments and board.

BIRKENHEAD BOROUGH HOSPITAL.—An Honorary Physician and two Honorary Surgeons.

BRADFORD CHILDREN'S HOSPITAL.—House Surgeon, male. Salary £80, with board, residence, and washing.

BRECON INFIRMARY, South Wales.—Resident House Surgeon, unmarried. Salary £50 per annum, with furnished apartments, board (all found except beer), attendance, fire, and gas.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn-road, W.C.—House Surgeon. Salary at the rate of £50 per annum, with board and residence in the hospital.

CHESTER GENERAL INFIRMARY.—Visiting Surgeon for two years. Salary £80 per annum, with residence and maintenance in the house.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—Second House Physician for six months. Salary at the rate of £30 per annum, with board and residence.

COUNTY OF SUTHERLAND.—Medical Officer of Health for the County of Sutherland. Salary £300 per annum, and £50 in lieu of travelling and other expenses, with certain exceptions. Apply to the County Clerk, Golspie.

DERBYSHIRE ROYAL INFIRMARY, Derby.—Resident House Physician for 12 months. Salary £100 per annum, with apartments and board.—Also Resident Assistant House Surgeon for six months. Salary £30 for that period, with apartments, board, &c.

DONCASTER GENERAL INFIRMARY AND DISPENSARY.—Indoor Dispenser and Assistant to the House Surgeon. Honorarium £29 guineas per annum, with board, lodging, and washing.

GENERAL HOSPITAL, Nottingham.—House Surgeon for two years. Salary £100, rising £10 a year to £120, with board, lodging, and washing.

GENERAL INFIRMARY AT LEEDS.—Resident Casualty Officer. Salary £100 a year, with board, lodging, and washing. Also House Physician for six months, board, lodging, and washing provided.

GLAMORGAN COUNTY ASYLUM, Bridgend.—Junior Assistant Medical Officer, unmarried. Salary £150, with board, apartments, washing, and attendance.

HOSPITAL AND DISPENSARY, Newark-upon-Trent.—House Surgeon, unmarried. Salary £30 per annum, with board and lodging in the hospital.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London.—Assistant Surgeon. Also two Assistant Physicians.

JEWS' HOSPITAL AND ORPHAN ASYLUM, West Norwood.—Dental Surgeon. Applications to the Secretary, 149, Bishopsgate-street Without, E.C.

KENT AND CANTERBURY HOSPITAL, Canterbury.—Assistant House Surgeon, unmarried. Salary £50 a year, with board, &c.

LEEDS PUBLIC DISPENSARY.—Junior Resident Medical Officer. Salary £85.

LONDON HOSPITAL, Whitechapel, E.—Assistant Physician.

METROPOLITAN ASYLUMS BOARD.—Assistant Medical Officer at the Imbecile Asylum at Caterham, Surrey, unmarried. Salary £120 per annum, rising conditionally to £150, with board, lodging, attendance, and washing. Subject to statutory deduction. Apply to the Clerk to the Board, Norfolk-street, Strand, London.

MIDDLESEX HOSPITAL, W.—Assistant in the Cancer Research Laboratories. Salary £100 per annum, with an honorarium of £50 after his second year of office.

NORTHAMPTON GENERAL INFIRMARY.—Assistant House Surgeon, unmarried. Salary £100 per annum, with furnished apartments, board, attendance, and washing.

NOTTINGHAM GENERAL DISPENSARY.—Assistant Resident Surgeon. Salary £130 per annum. Special arrangement for board, &c.

PARISH OF GAIRLOCH, Ross-shire.—Medical Officer. Salary from the Parish Council £200 per annum, besides private practice. To reside at Poolewe. Apply to Mr. James Mackintosh, Inspector of Poor, Poolewe.

ROYAL NATIONAL MISSION TO DEEP SEA FISHERMEN, Bridge House, 181, Queen Victoria-street, London.—Young Medical Officer for hospital mission ship *Queen Victoria* for two months. Salary three guineas per week and board. Apply to the Secretary.

ROYAL PORTSMOUTH, PORTSEA, AND GOSPORT HOSPITAL.—Assistant House Surgeon for six months. Salary at the rate of £50 per annum, with board and residence.

ROYAL SEA-BATHING HOSPITAL, Margate.—Assistant Resident Surgeon. Salary £52 per annum, with board and residence. Applications to the Secretary, Royal Sea-Bathing Hospital Offices, 30, Charing-cross, London, S.W.

ST. MARK'S HOSPITAL FOR FISTULA AND OTHER DISEASES OF THE RECTUM, City-road, London.—Honorary Physician. Also House Surgeon for not less than six months. Salary £50 per annum, with board, lodging, and washing.

THE CHIEF INSPECTOR OF FACTORIES has given notice of a vacancy for a Certifying Surgeon under the Factory Acts at Leek, in the county of Stafford. There are also similar vacancies at Birkenhead and Rebington, in the county of Chester.

THREE COUNTIES ASYLUM, near Hitchin.—Second Assistant Medical Officer. Salary £150 per annum, with board, apartments, washing, and attendance. Unmarried. Apply to the Clerk, St. Neots, Hunts.

TORBAY HOSPITAL, Torquay.—House Surgeon. Salary £100 per annum and £5 for nurses' lectures. Board, lodging, washing, and attendance provided (wine, spirits, and beer excepted).

VENTNOR ROYAL NATIONAL HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST.—Assistant Resident Medical Officer. Salary £80 per annum, with board and residence. Apply to Dr. Parry, R.M.O.

WEST KENT GENERAL HOSPITAL, Maidstone.—House Surgeon, unmarried. Salary 100 guineas per annum, with board and residence, &c., rising 10 guineas a year to 120 guineas.

WHITEHAVEN AND WEST CUMBERLAND INFIRMARY, Whitehaven.—House Surgeon. Salary £120 per year and £30 a year for dispensing, with furnished apartments and attendance.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL, Wolverhampton.—Assistant House Surgeon for six months. Honorarium at the rate of £50 per annum, and board, lodging, and washing.

# Births, Marriages, and Deaths.

## BIRTHS.

ROBINSON.—On Dec. 29th, at The Villa, Harleston, Norfolk, the wife of J. C. Reynolds Robinson, M.R.C.S., L.R.C.P., of a son.

RUTHERFURD.—On Dec. 30th, at 12, Newton-place, Glasgow, the wife of Henry Rutherfurd, M.B., of a daughter.

## MARRIAGES.

NASH—OLDERSHAW.—On Dec. 28th, at St. Alban's, Acton-green, Elwin H. T. Nash, M.R.C.S., L.R.C.P., of Oakfield House, Accrington, to Mary Monica, only daughter of Walter Oldershaw of Blandford-road, Bedford-park.

## DEATHS.

HARRISON.—On Dec. 30th, at Failand Lodge, Clifton, Bristol, Selina, the beloved wife of Alf. Jas. Harrison, M.B., J.P., aged 59 years.

HOWISON.—On Dec. 23rd, James Howison, L.R.C.P., L.R.C.S., L.M. Edin., of 33, Abbey-road, London, N.W. (late of Darlington), in his 77th year.

*N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

# Notes, Short Comments, and Answers to Correspondents.

## THE COURAGE OF IGNORANCE.

BEFORE the coroner at Devizes recently an investigation was held into the cause of the death of a servant girl, when evidence was given of obstinacy on the part of the deceased which medical men are well aware is commonly displayed by servant girls and which only too often prevents effective relief being given to them in their troubles. The story is briefly as follows. A servant girl in a situation at Bath felt so ill that she returned to her home in Devizes. Within a few hours of her return she died from peritonitis. The jury indicated a wish to add to their verdict some words censuring the girl's mistress at Bath for not calling a medical man to her aid, but the mistress was able to show that the girl absolutely refused to see a medical man until she got home. So she took a railway journey on a cold day when very ill and died at the end of it.

This reluctance of young women, generally young women of the lower orders, to see a medical man is a little extraordinary, though it is a matter which has so often been brought to the attention of the profession that it has ceased to cause surprise. Their action is very generally attributed to the courage of ignorance. Young women have many pains and unpleasant sensations which mean little and which pass away spontaneously. Their belief that they will be better soon is founded upon experience and so usually turns out correct that when they are seriously ill, if the symptoms, unfortunately for them, are not very urgent, they neglect to take medical advice. But ignorance does not account for all instances of such behaviour. Vanity plays its share as well as the spirit of self-sacrifice which every good woman is ready to display. Among nurses in hospital practice nothing is more common than to find a fixed determination not to go off duty even when they are obviously unfit to discharge their work. They know that in many cases their retirement to bed will mean the overwork of some of their colleagues, and they dislike intensely the idea of giving up, feeling it to be a confession of unfitness for their post; and so with considerable clinical knowledge to inform them fully of their foolishness, they remain on duty until a serious breakdown is inevitable or actually occurs. Again, in a hospital there is such a horror of the hysterical subject and malingerer that no one wishes to incur a suspicion of being either. The hysterical invalid counts for so much in the labours of our hospitals that there need be no surprise at this. In a hospital a good matron should be, and generally is, quick to detect real sickness, and firm in insisting upon the stupid if well-meant act of martyrdom ceasing at once; but in a private family the assurance of the dependent that "it is nothing" is apt to be accepted as correct.

And there is one other point upon which we should like to lay stress. It is one that we have referred to before—namely, the attitude of many masters and mistresses towards their servants. In this case, as we know, the girl's mistress behaved with complete kindness in offering her servant medical attention, but this is not always what occurs. A large proportion of servants are at sensitive ages and residing far away from home. They have come from the country and from provincial towns, often from Scotland, and easily become home-sick, especially if there should be a lack of sympathy and a failure to make them feel welcome. One of the commonest of ailments in domestic servants is chlorotic anæmia and it is amazing to see how often this condition is allowed to go on without notice and without treatment where the symptoms in a child of the family would quickly command all the resources of medicine. The neglected chlorosis drifts into chronicity with consequent impaired health or reaches a crisis in a gastric hæmorrhage with, possibly, a fatal issue. In many cases if mistresses did their duty they would not wait for the girl to complain nor assume that if she did not complain therefore all was well with her despite her looks. They would insist upon a medical man being consulted. It is no part of a master's or mistress's liability to provide medical attention for his or her domestic servants. All the same, or, rather, all the more, it is well to provide it for them. Servants often prefer their own medical man, but few of them are insensible to the kindness of a mistress who will offer her personal attention together with the advice of the medical man whom she consults for her own ailments and those of her children.

## SPITTING AND TUBERCULOSIS.

*To the Editors of* THE LANCET.

SIRS,—I read with great pleasure in THE LANCET of Dec. 30th, 1899, the report of the preliminary meeting of the Congress on Tuberculosis and hope soon to see established all over the world sanatoria in elevated, dry places for the treatment of tuberculosis by fresh air and sunlight, and our milk and meat supplies so supervised that there will be no danger of contracting these diseases from such sources. But could not spitting on the streets, in churches, theatres, railway, and other conveyances be put a stop to? Such spitting practices, besides being abominable and disgusting, may be the cause of spreading diseases and should be made a police offence. Meanwhile might not some good in that way be done by all the august persons taking an interest in the coming

Congress beginning at once to carry pocket spittoons and using them in public? Were such practices to become fashionable the poor consumptive would not feel himself so ostracised when others are using spittoons as well as himself. The spittoons of persons, non-smokers, would not require to be larger than a smelling bottle, and might be elegant as well as useful. Smokers and others suffering from disease might need rather larger ones; but they could still be elegant as well as useful. The making of these spittoons would develop a new industry and give employment to many. Hoping that you will find room for this scrawl in your next issue, and thanking you in anticipation,

I am, Sirs, yours faithfully,

Paisley, Dec. 26th, 1899. J. B. HUNTER, M D Glasg.

## "THE DIET OF DIABETIC SUBJECTS."

*To the Editors of* THE LANCET.

SIRS,—In THE LANCET of Dec. 2nd, 1899, at p. 1572, I observe a query from "Glyco" concerning the diet of diabetic subjects. Perhaps it may interest him to learn that the son of the late Dr. von Dühring (not "Douring" as he states) of Hamburg is Professor Ernst von Dühring in Constantinople who has published several interesting essays on syphilis, &c. No doubt this gentleman would be able to supply some information on his father's method of treating diabetes. In general, I believe, the plan has not been supported even in Germany very warmly.

I am, Sirs, yours faithfully,

F. A. PHILIPPI, M.D.

Othmarschen, n Hamburg, Dec. 27th, 1899.

## THE ACCOMMODATION OF THE INDOOR ASSISTANT.

*To the Editors of* THE LANCET.

SIRS,—May I suggest through your columns to principals who engage indoor assistants that they should make it a rule to provide them with a bed-sitting-room or a separate sitting-room if possible? Sometimes any small poky bedroom is thought good enough for the assistant, whose chances of reading and writing are thus out of the question. I am, Sirs, yours faithfully,

Dec. 27th, 1899. INDOOR.

## "THE MACKEY FUND."

*To the Editors of* THE LANCET.

SIRS,—I have received the following subscriptions on behalf of the widow of the late Mr. Stephen Mackey:—Amount previously reported, £10 7s.; Mr. R. L. Legate, Bridge House, Christchurch, £2; Dr. A. Ernest Sansom, Harley-street, £1 1s.

I am, Sirs, yours faithfully,

LEONARD C. DOBSON, M.D. Lond.

59, Addison-gardens, Kensington, Jan. 2nd, 1900.

## SEA-WATER FOR HOME USE.

*To the Editors of* THE LANCET.

SIRS,—Could any of your readers kindly inform me through THE LANCET of the name and address of any firm from which I could obtain sea-water in barrels for salt water baths at home?

I am, Sirs, yours faithfully,

St Helens, Jan. 1st, 1900. SALINE.

## THE TREATMENT OF GUINEA WORM AND ELEPHANTIASIS.

A CORRESPONDENT asks if corrosive sublimate hypodermically injected has been employed in the treatment of guinea worm and if so in what strength it should be used. He also asks whether any preventive measures have been employed in elephantiasis?

## "THE ANGLO-AMERICAN INSURANCE COMPANY."

*To the Editors of* THE LANCET.

SIRS,—You allude in THE LANCET of Dec. 30th, 1899 (p. 1870), to the arrest of the advance agent of this company. I think it would increase confidence in the *bona fides* of those who were recently acting with him as prospective directors if they took the opportunity of making their position in the affair clear and beyond possibility of suspicion. Such a course would render the success of any new company they may be promoting more probable.

I am, Sirs, yours faithfully,

Jan. 2nd, 1900. CRITIC.

## LIQ. AURI BROM. ARSENATIS IN RHEUMATISM.

REFERRING to our analytical notice of this interesting gold compound in THE LANCET of Oct. 12th, 1895, p. 921, a correspondent sends us some experimental evidence of its beneficial effect in rheumatism. He encloses specimens of crude uric acid in the condition in which it was precipitated from urine by hydrochloric acid. He has been subject to rheumatic pains for the past two years. The first specimen of deposits, which represents what he has usually passed during the attacks, is of a chocolate colour due to a mixture of urobilin and uro-hæmatoporphyrin, the latter being significant of certain febrile conditions, especially rheumatism. The second specimen was precipitated from the urine after an acute attack accompanied by pyrexia and muscular pains. The crystals are almost black with uro-hæmatoporphyrin. The third specimen is orange-coloured and is free from rheumatic pigment. This result followed on taking bromaurum and the rheumatic pains subsided.

## GRATUITOUS MEDICAL ASSISTANCE TO THE PUBLIC.

*To the Editors of* THE LANCET.

SIRS,—I should like the opinion of your readers on the following case:—A and B are in practice in the same town which is made up entirely of working men and tradesmen. A has his share of work and is public vaccinator. B vaccinates all he can get hold of free of charge. A has spoken to B on the matter but it has been of no avail.† [A naturally does not speak to B after his refusal to stop this free vaccination.

B allows an unqualified man to visit some of his cases. I have seen him enter houses but cannot prove what he does inside. I am positive there was serious illness in the houses at the time.

I should like to know to what extent these unqualified men can be used and, further, whether it is my duty to inform the General Medical Council of such a case.

I enclose my card, and am, Sirs, yours faithfully,

Jan. 2nd, 1900. LIVE AND LET LIVE.

"*" It is wrong to offer gratuitous medical attendance indiscriminately, as the medical profession is already severely handicapped by the amount of work that is done for the public without remuneration. The limitations laid down by the General Medical Council indicate the proper use that may be made of unqualified assistants; if our correspondent can prove that B is defying the General Medical Council he can inform that body. He must beware of allowing personal animus to influence his judgment of facts.—ED. L.

## ROENTGEN RAYS AT A MISSIONARY STATION.

*Mercy and Truth* for December states that the medical missionaries at the Peshawar station have frequently to deal with serious bullet-wounds and that the Rev. Dr. Weldon, the Metropolitan of India, after a recent visit to this mission gave £25 towards the cost of a Roentgen ray apparatus, the balance required being made up by three other subscribers.

## WEST AFRICAN DISEASES.

A CORRESPONDENT asks to be advised as to how to obtain information with regard to remedies for West African diseases.

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*Mrs. P.* is strongly advised to answer no advertisement. If she or the mother advertises the strictest investigation must be conducted into the character, means, and antecedents of anyone who replies. An opening for fraud, to say nothing of murder, is so obviously given by such an advertisement that it will be difficult even with the most honest and humane intention to get any respectable paper to insert it. The best course would be to select a first-class journal and write to the editor giving assurances that an annual income will be paid for the support of the child and not a sum down, and that the child will be under the guardianship of its relations in its new home.

*W. N. C.*—The answer to our correspondent's question depends much on whether the visiting staff are permanently attached to the hospital or whether patients are to be visited by their own medical advisers. In a typical hospital in London, not a municipal institution of course, there are 184 beds, the average number occupied is 71 and there are as officers: physicians, 2; assistant physicians, 2; surgeon, 1; and resident medical officers, 2. There are also three consulting physicians. We recommend for the institution mentioned by our correspondent two resident medical officers and two visiting physicians.

*R. F.*—(1) We think our correspondent will be well advised to consult a leader of the profession in the locality. The amount to be charged should take into account his ordinary fees and the circumstances of the patient, neither of which are known to us. (2) The money is not a subject for income-tax.

*Galileo.*—It would be better to advertise for a ward maid, but possibly the woman for the appointment has been already selected. We do not know any institution where such partial training is given, but perhaps the nearest local hospital would help in a good work by offering facilities.

ERRATUM.—In our notice of the "Empress Puncture-Proof Bands" for cycle tyres in THE LANCET of Dec. 23rd, 1899, page 1744, the price per band should have been 5s. and not 7s. 6d. as there stated.

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**During the week marked copies of the following newspapers have been received:** *Glasgow Herald, East Anglian Daily Times, Staffordshire Advertiser, Aldershot Gazette, Blackburn Telegraph, Scotsman, Hereford Times, Wigan Examiner, Times of India, Pioneer Mail, Architect, Builder, Citizen, Liverpool Daily Post, Westmorland Gazette, Truth, Yorkshire Post, Western Mercury, Bristol Mercury, New York Sun, Leeds Mercury, Kettering Leader, Western Morning News, Scarborough Mercury, Manchester Guardian, Huddersfield Examiner, Birmingham Daily Post, Gainsborough Leader, Cambridge Chronicle, Daily Argus, Birmingham, Sanitary Record, Eastbourne Gazette, Peterborough Express, Loughborough Monitor, Dundee Advertiser, Norfolk Weekly Standard, Northern Star Ulster Echo, Midland Mail, News of the World, Bath Argus.*

6, 1900.

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